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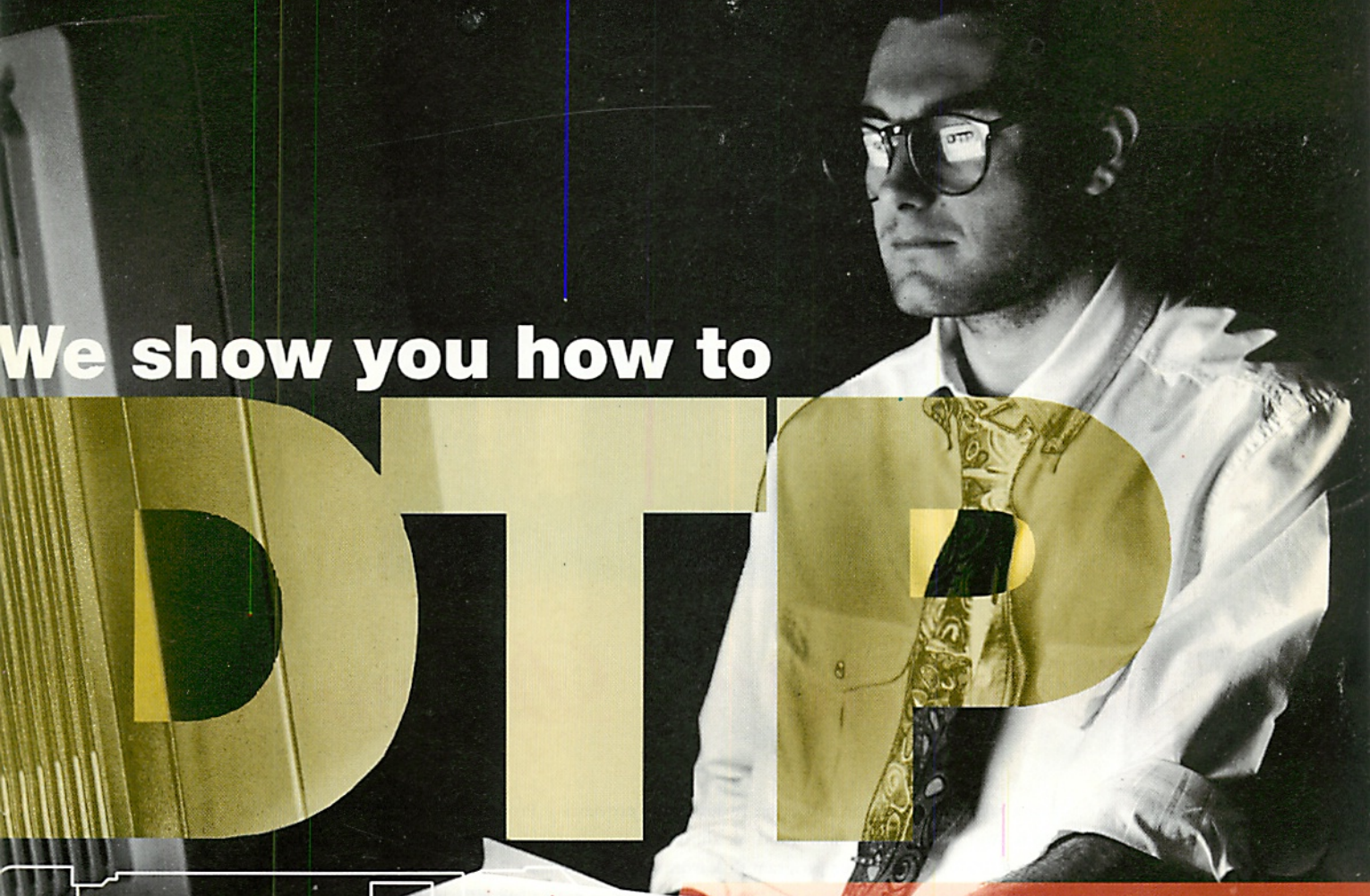

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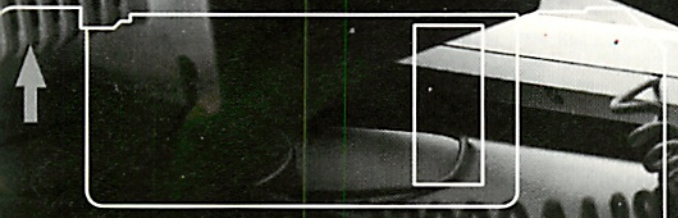

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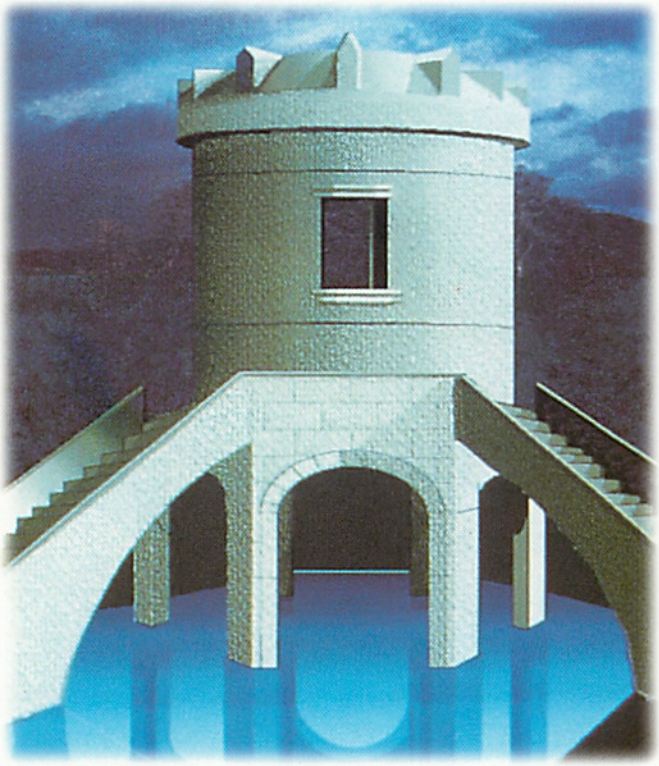

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Podd, KS1,2	ESM	£27
Podd – Welsh, KS1,2	ESM	£38
Polyominoes	Topologika	£29
Populous	Krisalis	£22
Poster	4mation	£75
PowerROUTER	Silicon	£159
Prehistoric Animals, sprites	Micro Studio	£16
Premier	Circle	£71
– DataBase	Circle	£25
– WordProc	Circle	£25
Presenter GTi	Lingenuity	£66
PrimeArt, KS1-4	Minerva	£69
PrimeMover, KS2-4	Minerva	£75
PrimeSolver, KS1-4	Minerva	£POA
PrimeWord, KS2-4	Minerva	£55
Printer Drivers, RISC OS: Canon BubbleJet, Canon LBP, Canon PJ1080, ColourCel, Epson JX, Epson ESC-P2, HP, Integrex 132 – each	Ace	£19
Deskjet 500C, Epson / Star colour – each	RISC	£15
ProDrivers: Canon LBP8, Epson ESC-P2, HP Colourjet – each	Ace	£37
TurboDrivers: Canon, Epson Stylus 800, HP – each	CC	£49
ProArtisan	Clares	£71
ProArtisan 2	Clares	£POA
ProCAD, KS4	Minerva	£394
Programming in ANSI Standard C on the Archimedes	Sigma	vo £15
Prophet (requires 2 Mb)	Apricote	£153
Prophet Entry Level	Apricote	£10
ProSHEET	Silicon	£39
Protext	Arnor	£117
Provocator	Computer Tutorial	£15
Puncman 1 and 2	Chalksoft	£16
Puncman 3 and 4	Chalksoft	£16
Puncman 5 to 7	Chalksoft	£18
Punctuate	Xavier	£31
Punctuate!	Topologika	£25
QDBug	Leading Edge	£58
Quest for Gold	Krisalis	£19
QuicKey	ICS	£10
– site licence		£30
Real McCoy 2	Fourth Dim	**£22**
Real McCoy 3	Fourth Dim	£23
Real McCoy 4	Fourth Dim	£27
Recall, age 8-13	Sherston	£37
Redshift	Minerva	£10
RemoteFS	Atomwide	£48
Render Bender 2	Clares	£78
Repton 3	Superior	£20
Resultz	Colton	£POA
Revelation 1	Longman	£39
Revelation 2	Longman	£75
Revelation 2 CD Rom	Longman	£98
Revelation ImagePro	Longman	£127
Reversals	Chalksoft	£17
Rhapsody 2	Clares	£45
Rhapsody 3	Clares	£79
Rhythm-Bed	Clares	£39
RhythmBox II, age 8+	EMR	£34
RiscBASIC Compiler	Silicon	£79
RiscForth Compiler	Silicon	£79
Risc OS 3 First Steps	Dabs	vo £POA
Risc OS 3 Programmer's Reference Manual	Acorn	vo £99
Risc OS Companion Vol 1	Oak	vo £49
Risc OS Extras 1992	Acorn	£9
Risc OS Style Guide	Acorn	vo £12
RoboLogo	Silicon	£39
Round the World Yacht Race, age 9+	Storm	£27
Saloon Cars Deluxe	Fourth Dim	£25
– Deluxe Extra Courses	Fourth Dim	£16
S-Base Developer	Longman	**£150**
S-Base Developer Plus	Longman	£275
S-Base Network	Longman	£275
S-Base Personal	Longman	**£79**
Schema	Clares	£95
Schema 2	Clares	£POA
Science, drawfiles	Micro Studio	£25
Score Draw	Clares	£44
Scorewriter PMS Desktop, age 12+	EMR	£147
ScreenPlay	Widgit	£35
ScreenTurtle version 2	Topologika	£54
Search and Rescue, age 9+	Storm	£27
Seashore Guide, drawfiles	Micro Studio	£16
Seelinks – Ourselves, KS1,2	ESM	£27
Seelinks – Pond Watch, KS2	ESM	£35
Seelinks – Tourism, KS3	ESM	£35
Seelinks – Transport, KS2	ESM	£35
Serenade	Clares	£106
Serpents	CIS	£16
Settlement, KS3	ESM	£31
ShapeFX	Data Store	£10
ShareHolder	Silicon	£106
ShareHolder Professional	Silicon	£164
ShowPage	CC	£145
Shylock Gnomes, age 10-15	Selective	£16
Sim City	Krisalis	£24
SkyHunter	Longman	£22
Sleuth	RISC	£POA
smArt	4mation	£50
smArt Aliens, Animals, Dinosaurs, Egypt, Europe*, Faces*, Fantasy, Fashion, Fiddles & Drums, Heraldry, Homes*, Leisure*, Look Smart, Smartoons, Trees and Gardens *Please specify English, French, German, Spanish or Welsh – each	4mation	£15
smArtFiler	4mation	£32
smArt Modern Languages	4mation	£19
Smudge the Spaniel, age 4-8	Storm	£20
Snippet (new version)	4mation	£32
Soapbox	Xavier	£34
SolidCAD	Silicon	£79
SolidsRender	Silicon	£79
SolidTools	Silicon	£234
– education price		£194
SongBook, age 3-10	EMR	£24
Sound Engineer, age 12+	EMR	£59
Sound FX Maker	CIS	£31
Sounds & Rhymes	Xavier	£29
Spark	David Pilling	£5
SparkFS	David Pilling	£20
Sparkle	Morley	£59
Special	ICS	£10
– site licence		£30
Speech!	Superior	**£17**
Spelling week-by-week	Chalksoft	£21
Spex	ExpLAN	£98
Spheres of Chaos	Matt Black	£19
Splash, age 7-11	Sherston	£19
Splice	Ace	£34
Split an Image, age 7-16	Sherston	£16
Spoken Word	Wyddfa	£16
Spooler	Computer Tutorial	£9
Sporting Triangles	CDS	£19
SportsDay	Selective	£22
SportsPeople	Selective	£22
SpriteEd	Computer Tutorial	£17
SpySnatcher	Topologika	£12
Square Route	Computer Eyes	£16
Starspell Plus	Fisher-Marriott	£19
StartWrite	Icon	£55
StockPack	Topologika	£37
StoryBook, age 3-10	EMR	£59
StrongED	Staffion	£22
Studio24Plus Version 2, age 11+	EMR	£149
Studio24Plus Version 3, age 12+	EMR	£210
Stunt Racer	Fourth	£25
SUMthing	Resource	£19
SuperDump	Silicon	£20
Superior Golf	Superior	£14
SuperPlot	Silicon	£20
Supersounds	CIS	£15
Supersounds 2	CIS	£15
Swiv	Krisalis	£19
TABS	ExpLAN	£95
Talisman	Minerva	£8
Talking Pendown	Longman	£58
Talking Pictures	Wyddfa	£16
Target Maths	Triple R	£15
Technodream (Nevryon 2)	Superior	£20
TechWriter	Icon	£159
Thinklink	Xavier	£29
ThinkSheet	Fisher-Marriott	£38
Thundermonk	Minerva	£11
Tiles	Brain Games	£16
Timeshare	Fisher-Marriott	£19
Timetabler	Minerva	£549
Time Traveller, KS2	ESM	£37
– Britain Since the 1930s, KS2		£30
– Expansion, Trade and Industry, KS3		£36
– Making of the United Kingdom,KS3		£39
– Medieval Realms, KS3		£36
– The Victorians, KS2		£30
TinyDraw/TinyPuzzle	Topologika	£34
TinyPuzzle	Topologika	£24
Titler	Clares	£119
Toolkit Plus	Clares	£36
Tools Graphics, drawfiles	Micro Studio	£23
Topographer	Clares	£63
Touch Type	Iota	£39
Tower of Babel	Cygnus	£17
Trace	David Pilling	£5
Tracer	Midnight	£46
Tracker	Leading Edge	£37
Transport, drawfiles	Micro Studio	£25
Turbo Type	CIS	£20
Tween	Ace	£35
Twin	Acorn	£24
Twin World	UBI Soft	£14
TWO (Task and Window Organiser)	ICS	£10
– site licence		£30
TypeStudio	RISC	£39
Utility Disc 1	Data Store	£8
Utility Disc 2	Data Store	£13
Utility Disc 3	Data Store	£7
Utility Collection	Data Store	£21
Vector	4mation	£75
View»Mac 3	Human	£65
– Arc/Mac Cable	Human	£24
Viewpoints, age 7-11	Sherston	£37
Virtual Golf	Fourth Dim	£25
Visual Backup	Dabhand	£42
Vox Box	Clares	£46
Waterloo (not OS 3.1)	Turcan	£19
Whale Facts	Topologika	£34
Wordbank	Topologika	£25
Words and Pictures	Chalksoft	£18
WordWorks	CC	£38
Wordz	Colton	£89
World Geography Maps, draw	Micro Studio	£23
WorldMaker, KS3,4	ESM	£57
World Map Study, KS3,4	ESM	£67
Worldscape	Leading Edge	£17
World Wildlife, sprites	Micro Studio	£16
Worra Battle	Oak	£15
WorraCAD	Oak	£79
Yacht 2	Computer Tutorial	£49
Yacht 7	Computer Tutorial	£94
Zarch	Superior	£14
Zelanites (not OS 3)	Micro Power	£15
Zool	Gremlin	£20

ICS

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HARDWARE

I²C PRODUCTS . . .

AnDi Oddule	Baildon	£39
I²C Adaptor (needed unless you already have an I²C socket)	Baildon	£10
I²C SWI (enhanced IIC_Control)	Baildon	£15
– bought with Oddule		£5

SCANNERS, DIGITISERS . . .

ArcScanner including Epson GT-4000	Clares	£1660
Colour Converter	Lindis	£145
FaxScan	Spacetech	£94
GreyHawk	Wild Visilon	£98
Handipad	TechSoft	£173
Hawk V9 MkII	Wild Vision	
– standard		£199
– hardware dithered		£259
HiVision Digitiser Colour	HCCS	
– A3000 External		£137
– A3000 Series / A4000 Internal		£124
– A5000 / 300 / 400		£124
iMage (Sharp JX-100)	Irlam	
– for A5000		£490
– for other computers		£589
Image Scanner	Iota	£383
– Colour Upgrade Kit	Iota	£239
– Fast Parallel Card	Iota	£98
i-Scan 200	Irlam	£539
i-Scan 400	Irlam	£589
Pineapple Colour Video Digitiser	Pineapple	£195
– A3000 boxed	Pineapple	£230
ProImage (Epson GT6000)	Irlam	
– for A5000		£989
– for other computers		£1089
Scan-Light A4	CC	£277
– with Sheet Feeder	CC	£360
Scan-Light 256	CC	£190
– A3000 internal	CC	£190
Scan-Light Professional	CC	£565
– as above + SCSI interface	CC	£699
SnapShot Colour Video Digitiser	Lingenuity	£195
– A3000 version	Lingenuity	£275
Spectra	RISC	
– Archimedes / A5000		£545
– A3000 Series / A4000 Internal		£545
– A3000 External		£555
Vision Digitiser	HCCS	
– A5000 / 300 / 400 Mono		£48
– A5000 / 300 / 400 Colour		£76
– A3000 External Mono		£60
– A3000 External Colour		£89
– A3000 Series /A4000 Internal Mono		£48
– A3000 Series / A4000 Internal Colour		£76

MEMORY . . .

Fitting extra unless otherwise stated
† Fitting fairly easy ‡ Fitting needs expertise

A3000 2 Mb Upgradable †	Atomwide/IFEL	£43
A3000 4 Mb †	Atomwide/IFEL	£100
A3010 1-2 Mb	IFEL	**£29**
A3020 / A4000 2-4 Mb †	IFEL	£55
A310 2 Mb Upgradable soldered ‡	IFEL	£88
– as above + MEMC1a		£113
– as above + MEMC1a + fitting		£143
A310 4 Mb soldered + MEMC1a ‡	IFEL	£152
– as above + fitting		£182
A5000 2-4 Mb Non-upgradable†	Atomwide	£85
A5000 2-4 Mb Upgradable †	Atomwide	£99
A5000 2-8 Mb including fitting	Atomwide	£500
A5000 4-8 Mb including fitting	Atomwide	£391
A540 4 Mb †	Acorn	£238

PRINTERS . . .

ArcLaser 300-6	Calligraph	£895
ArcServer 300-8	Calligraph	£985
Bubble Jet BJ-10sx	Canon	£187
Bubble Jet BJ-10sx + TurboDriver	Canon/CC	£219
Bubble Jet BJ-200	Canon	£282

For ordering details please turn to page 3

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Bubble Jet BJ-230	Canon	£315
Bubble Jet BJ-300	Canon	£325
Bubble Jet BJ-330	Canon	£380
Bubble Jet BJC-800 + TurboDriver	Canon/CC	£1374
DeskJet 510	Hewlett-Packard	£275
DeskJet 500C	Hewlett-Packard	£375
DeskJet 550C	Hewlett-Packard	£525
Laser Direct HiRes4	CC	£899
– 250-sheet Paper Cassette		£99
Laser Direct HiRes8	CC	£1275
Laser Direct HiRes Board	CC	£325
Refill toner cartridge for Canon EPS		£50
New toner cartridge for Canon LBP-4		£59

COMPUTERS . . .

A3010 1MB FD Family Solution	Acorn	£420
A3010 2MB FD Learning Curve with Monitor	Acorn	£675
– as above + JP150 Printer		£889
A3020 2MB FD	Acorn	£749
A3020 2MB HD60	Acorn	£899
A4 2MB FD	Acorn	£1395
A4 4MB HD60	Acorn	£1695
A4 4MB HD80	Acorn	£1699
A4 4MB HD120	Acorn	£1799
A4 Extra Battery Pack	Acorn	£50
A4 Shoulder Bag	Acorn	£35
A4000 2MB HD80	Acorn	£945
– as above + Home Office		£995
A5000 2MB HD80 Multiscan	Acorn	£1395
– as above + Learning Curve		£1455
Pocket Book	Acorn	£212

MISCELLANEOUS. . .

386 PC Expansion Card 25 MHz	Aleph One	
– 1 Mb		£374
– 4 Mb		£468
486 PC Expansion Card	Aleph One	
– 1 Mb		£463
– 4 Mb		£557
4-slot 4-layer Backplane	IFEL	£52
A300/400 Fan kit	ICS	£15
A3000 Expansion Box	Wild Vision	£135
A310 RISC OS Carrier Board ‡	IFEL	£18
A5000 Fitting Kit for second hard disc	ICS	£15
Arckey Function KeyStrip Holder	ICS	V0 £3
– pack of 4		V0 £10
ArcNET	ACS	£69
ARM3 ‡	Aleph One/IFEL	£165
ColourBurst	State	£395
ColourCard	CC	£225
– A3000 External	CC	£225
Dongle Dangle with screw fittings	ICS	£6
Fan filters (pack of 10) (not A5000)	ICS	£6
FaxPack	CC	£289
Floppy Discs, 10 × 3½" High Density		£10
G16 True Colour Card	State	£258
G8 Plus Accelerator	State	£238
HiPoint Mouse for A4	Genius	£49
Microlin fx Pocket Fax Modem	Pace	£179
Micro Mouse	Clares	£26
Monitor Stand for A3000	ICS	£21
Mono/SCSI	Atomwide	£48
Podule Case for A3000	HCCS	£16
Printer/SCSI	Atomwide	£74
Printer Port Sampler	Leading Edge	£42
Publishing Pack	CC	£475
RISC OS 3 Upgrade	Acorn	£42
– Bulk package	Acorn	£335
– A5000	Acorn	£19
Seal 'n Type spill-proof Keyboard Covers		
– Archimedes / A5000	Kador	£14
– A3000	Kador	£14
TouchWindow	Lindis	£234
Whisper Fan Quietener (for A300/A400 series only)	ICS	£15
Wizzo IDE Filing System on rom	ICS	
– Wizzo4 for A4		£29
– Wizzo5 for A5000		£29

"You wonder how you ever managed without QuicKey."
NOW ONLY £10

"Congratulations on ColourSep! The results, compared with the drivers currently available, are bordering on the fantastic."
NOW ONLY £15

"TWO is the best thing I've ever bought."
NOW ONLY £10

As well as letting you type all those extra characters, Special is the easiest way to examine new fonts.

"DrawBender is quite stunning."
NOW ONLY £10

Padlock is our top seller for simple disc security.

"Fontasy offers a wider range of effects than FontFX. It is a package for the perfectionist, whether professional or enthusiast."
NOW ONLY £15

HOW TO ORDER

VAT: Zero-rated items are marked V0. UK customers please add 17.5% to all other prices. EC customers outside the UK (including BFPO) please do the same unless you are VAT registered, in which case quote your international VAT number. Ours is GB 595 7258 84.

CARRIAGE IS FREE WITHIN MAINLAND UK IF YOU PAY ON ORDERING.

Overseas carriage: If you are paying by credit card we will add airmail and insurance at cost. Otherwise please add £6 (Europe) or at least £12 (elsewhere) for each software item and send a pounds sterling bank draft payable at a London clearing bank, or Eurocheques for not more than £100 each.

Credit cards are welcome. We do not charge your account until your order is fulfilled. Your name and address must be as known to the credit card company. If you are leaving an order on our answering machine please include your telephone number, the expiry date of your card, and your calculation of the total payment due. We will make no charge for credit card commission unless we have informed you first.

Official orders are welcome from UK government and educational institutions. Payment is due in 14 days. Invoices are subject to carriage and late payment charges.

Site licences are available for most products. Please check our prices.

All products, prices and specifications are offered in good faith and are subject to change without notice. We process all orders immediately, but suppliers do sometimes keep us waiting. Goods are guaranteed but we do not supply them on approval. Returns and cancellations can only be accepted by prior agreement and there may be a charge to cover the costs involved.

AUTHORISED ACORN DEALER

ICS (Ian Copestake Limited)

Dept AW21, 1 Kington road, West Kirby, WIRRAL, Merseyside, L48 5ET

Tel: 051-625 1006 Fax: 051-625 1007

E&OE D61 93JL19

LICENSED CREDIT BROKER

New games house springs into life

Acorn's Marketing Manager, Simon Lovesey, has quit the company to start his own venture, GamesWare. The fledgling company has already signed a deal to market two chart topping games from the 16-bit formats; Xennon 2 and RoboCod.

GamesWare claims to have a number of products under development and expects to have an impressive line up of around 12 titles available before the end of the year.

The company is mainly concentrating on licensed conversions for the moment, but is exploring the market and welcoming ideas for new entertainment products. Lovesey indicated that adventure gaming is one area that his company is considering in the longer term.

Commenting on the new venture, Lovesey said, "For a long time, Acorn owners have been starved of many of the best games, which have been readily available on other home computers and consoles. GamesWare will ensure that many of the leading games are brought into the Acorn market."

Is Simon Lovesey trying to tell us somthing?

The formation of GamesWare by an ex-employee of Acorn is good news for the industry. Acorn has not so much lost a marketing manager but gained a new support on the outside. His departure would also suggest that Acorn is to do more to appeal to the personal and home user, possibly with a price cut of its A3010 entry level machine.

The high street catalogue store, Argos, recently slashed the price of it's A3010 pack to £399 during its summer sale. This represented a saving of £100 on the RRP. It seems possible that Acorn may well follow suit in the run up to Christmas as the Argos price reduction annoyed many dealers who can barely purchase the machine for the Argos retail price from Acorn.

For more information on GamesWare's products, call 0703 456523.

Acorn Announces FPA

After years of speculation, Acorn recently announced that it and ARM Ltd. had completed development of the Floating Point Accelerator for its RISC machines.

The Advanced RISC Machines chip is the product of a great deal of work. Like its RISC processor chips, it is a low power device (dissipating just 250mW as opposed to the 1-3W that are typical of other co-processors) that fits into the socket present on A5000 machines and later revision A540 and R260 workstations. The wonder chip has a peek throughput of up to 5 Millions of Floating Point Operations per second (MFLOPs) at 26Mhz and achieves an average throughput of over 3 MFLOPs for a range of floating point calculations.

Many packages will benefit from a resident FPA chip. Any application that previously made use of Acorn's Floating Point software emulator will automatically take advantage of the hardware if fitted. Related performance will increase by as much as a factor of 50. Applications software that will typically benefit included CAD and Vector art packages such as ArtWorks, ProCad, Vector etc.

Acorn is pricing the FPA very competitively. Just £99 (plus VAT) will buy you the plug in chip and you should be able to get one direct from your local Acorn dealer. If you require further information about the FPA, a 62-page data booklet, detailing schematics, programmer's model, full instruction set and more can be bought for £10 from Vector Services, 13 Dennington Way, Wellingborough, Northants, NN8 2RL.

ITs Suite

Primary school education in Essex has received a boost with 250 schools gaining hardware and software for the curriculum by matching GSET funding with their own cash. The choices made were Acorn hardware with eight software packages installed on hard disk. Longman Logotron is the supplier of six of the packages, which include its educational word processor, Pendown and the new introduction to Logo, First Logo.

The scheme was co-ordinated by John Sams and the IT team at Essex Development and Advisory Service and Sams says "We have used our influence to ensure that our schools get the best possible value for money, but, more importantly, we have helped them to choose their own IT solutions."

News Brief

Oops!

The August issue of Archimedes World contained a review of ING in the Nearly Free pages. We have since discovered that ING is not in the public domain as originally thought. The product is a copyright development package and should not be passed on as public domain. Naturally, unauthorised ownership is illegal.

Oops, take 2!

In the July issue, we published a review of !Help 3 from Sherston Sofware and quoted an inflated price. For the record, !Help 3 costs £9.99 and not £19.99 as previously stated.

IT Helps

Resource has announced the date for its education conference and exhibition. Titled IT Helps, described by the Minister of State for Education as "one of the most important events in the IT calendar" it is to be held at Doncaster Racecourse Exhibition Centre on Friday, November 26th from 9am to 6pm.

The only event of its kind in the North of England has already attracted exhibitors such as ICL, Philips, Apple, Research Machines and, naturally, Acorn computers. A host of software houses are also booked in. Admission to the event is free, but seminars are by ticket only. These can be booked in advance at £10 for three sessions. Remaining tickets will be available on the day for £5 per seminar. Call 0302 340331 for more details and to order your tickets.

DTP gets Smart

Smart DTP has announced that it is to launch a range of professional quality clip art that is to be available in both ArtWorks and Draw formats. The first pack concentrates on transportation and should be available around now. Call Smart DTP on 0332 842803.

ICS WIZZO (it's magic)

051-625 1006

The ideA range

ICS was the first company to offer IDE products for Acorns back in 1990; now they are the standard choice for new Acorn computers. Building on three years' experience we have continually improved our IDE filing system. It now offers the highest level of RISC OS compliance, and compatibility with at least 45 different hard discs tested by us. Can any other supplier make this claim?

Our IDEFS abolishes the RISC OS limit of 512 Mb, and offers extra features such as password protection, background operation, disc partitioning, and power saving (which allows some discs to stop spinning when idle).

Partitions can have different levels of protection. Family or pupils can access some of your files while you keep others safely out of their reach. Or you can simply protect the whole disc (reformatting is not required for this).

Our hard disc upgrade kits are based around two internal interfaces at present: IDEA3IN for the A3000 Series, and IDEARCIN for the A300/A400/A500 Series. All kits are designed to a high standard and include all the parts you will need.

IDEA3IN upgrade kits include an I²C expansion socket as standard. They come with a 2½" disc already attached, and are easy to fit once you have opened up your computer. False rumours have been spread in the past (by sellers of SCSI hard discs) that internal upgrades might not be safe in an A3000. In three years we have never heard of an actual problem, but please ask Acorn's Technical Department if you wish to be reassured.

IDEARCIN upgrade kits provide a fast 16-bit link all the way from the computer to the hard disc. They can even be fitted to an A310 without a backplane – quite a cost saving. A second hard disc can easily be added later if required.

Interfaces and hard discs can also be bought separately. By shopping around you may even save a few pounds. But beware: not all IDE hard discs work with all interfaces, and if you have a problem it may be difficult to decide who should put it right. We recommend buying a complete kit from one source.

WIZZO is the name given to our IDE filing system when it is supplied as a single rom chip. Wizzo5 is for the A5000, and Wizzo4 is for the A4. You should buy a Wizzo if you need password protection or wish to use larger hard discs. (Wizzo4 has been delayed slightly – we are adding a feature to ensure compatibility with possible future A4 upgrades).

A Wizzo rom by itself will only produce a slight speed improvement. If you need speed in an A5000, fit an IDEARCIN interface instead. Up to 60% improvement can then be achieved, but this does depend which hard disc you use so do check with us first.

How to read our ideA product references

A number at the end is the nominal hard disc capacity in megabytes. We usually round this down, so the actual formatted capacity may be higher. All discs have auto-parking. Average access times vary but all are below 20 ms.

All prices shown exclude VAT and are subject to change without notice. The cost to us for hard discs can vary enormously from week to week – not always downwards! Your local dealer can obtain *ideA* products from us or from a distributor.

Archimedes A300/A400/A500 Series Internal Upgrades

Package includes formatted hard disc, ideA interface card, hard disc cradle and fittings, fan kit, replacement multi-purpose LED (power and drive status), manual with fitting instructions. Can be fitted to an A310 without a backplane. If a backplane is used it must be a 4-layer type. Easily fitted by most users.

IDEARCIN 80	£225	IDEARCIN 240	£425
IDEARCIN 100	£255	IDEARCIN 330	£500
IDEARCIN 120	£275	IDEARCIN 426	£575
IDEARCIN 170	£305	IDEARCIN 540	£799

A3000 Series Fully Internal Upgrades

Package includes formatted hard disc mounted on ideA interface card, manual with fitting instructions. Fully internal, using internal expansion slot. Co-exists with floppy drive and memory upgrades. Fits the new 1992 computers. Easily fitted subject to Acorn warranty stipulations.

IDEA3IN 40	£225	IDEA3IN 120	£350
IDEA3IN 60	£275	IDEA3IN 130	£450
IDEA3IN 80	£325	IDEA3IN 209	£499
A3000 FAN KIT (not usually required*)			£19

**Only required if the computer has been fully upgraded, e.g. with maximum memory AND Econet AND an external podule.*

Separates for hard disc upgrades

We can only guarantee the performance of ideA interface cards with hard discs we have tested ourselves, so please check if in doubt. If you are buying a hard disc for an A5000 please say so. If you intend to fit the disc in addition to an existing one we need to know the make and model of the existing disc. Acorn's interface does not support all makes of disc, and some models will work as a second disc but not on their own.

Hard discs on their own are listed as, for example, IDEA 80. An S at the end indicates a 2½" disc.

IDEARCIN (Archimedes Interface for Internal disc(s))	£60
IDEA3IN (A3000 Interface for Internal disc)	£75
ARCHIMEDES INTERNAL CRADLE KIT	£15
ARCHIMEDES A300 / A400 SERIES FAN KIT	£15
4-SLOT 4-LAYER BACKPLANE	£52
POWER CABLE FOR SECOND HARD DISC	£5
A5000 SECOND HARD DISC FITTING KIT	£15

IDEA80	£179	IDEA240	£350
IDEA100	£215	IDEA330	£470
IDEA120	£245	IDEA426	£499
IDEA170	£275	IDEA540	£750
IDEA40S	£140	IDEA120S	£299
IDEA60S	£200	IDEA130S	£399
IDEA80S	£245	IDEA209S	£449

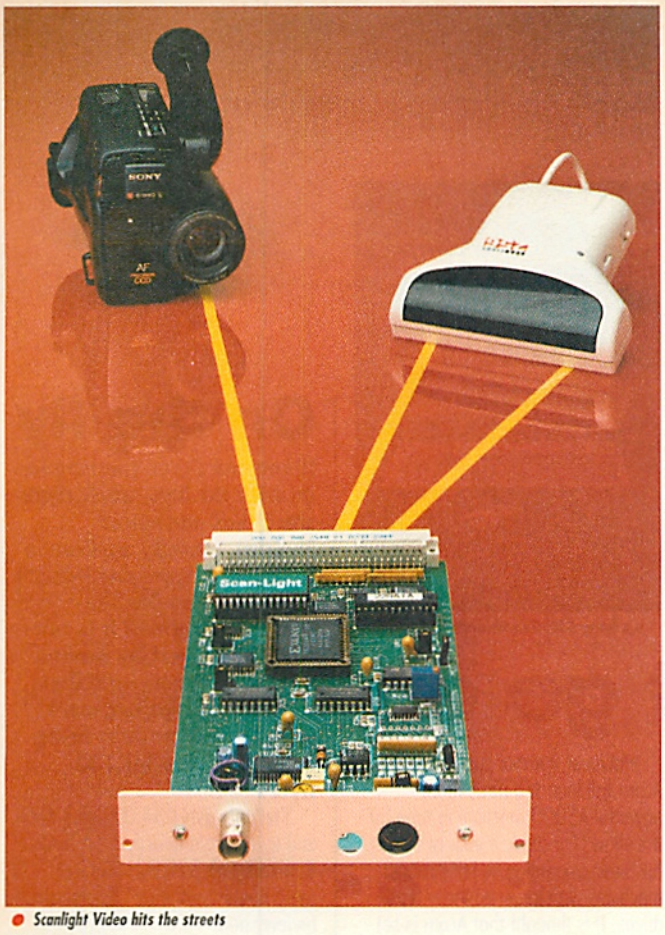
WIZZO IDE Filing System on rom

Package includes rom, manual and fitting instructions. Compatible with RISC OS 3.0 and 3.1. Allows up to four logical partitions over two physical drives. Each partition appears separately on the icon bar and can have different password protection. Makes use of existing Acorn hardware for maximum compatibility, but works with a wider range of hard discs. Security breaches using ADFS can be prevented. Can be fitted easily by a competent user.

Available now: WIZZO5 for A5000	*introductory price* £29
Available soon: WIZZO4 for A4	*introductory price* £29

Quantity discounts available • Dealer enquiries welcome

ICS (Ian Copestake Limited), Dept AW21, 1 Kington road, WIRRAL, Merseyside, L48 5ET



Scanlight Video hits the streets

New merger offering

Computer Concepts and Wild Vision have taken the next logical step in the scanning and digitising world. Concepts has already re-written its ScanLight 256 software to work with both the scanner and Wild Vision's GreyHawk digitiser (see August 1993 AW for review). Now, the collaboration has produced a combined grey scale scanner and digitiser product in one.

The ScanLight Video 256 offers all the power of the individual products. The package includes a 256 grey scale hand scanner head and two software applications; ScanLight and TakeOne.

Both ScanLight 256 and GreyHawk will continue to be marketed as separate products with the ScanLight Video 256 being an addition with a price tag of £220 (plus VAT). Owners of either the scanner or digitiser should be able to upgrade to the new combined card. Call Computer Concepts on 0442 63933 or Wild Vision on 091 519 1929 for more details.

Worth the weight

APA has released a version of its Genesis compiler, Genup Lite, for Genesis Plus II users to create professional applications. Genup Lite works on any machine with RISC OS3.1 or above, allowing applications to be used across Econet. The package includes the compiler and runtime code, a fast indexer, example applications and Bookmark, a utility program allowing users to mark resources for later use.

Genup Lite cost £79 plus VAT, or £49 plus VAT for educational use. APA can be contacted on 0634 29522

Pocket linking

Minerva Software has announced a new link facility to connect the Acorn Pocket Book to DTO Base, part of its DeskTop Office Package. Minerva claims that no other database has this facility and, considering that Desktop Office incorporates a database, word processor, spreadsheet, graphs facilities and a comms package, this is yet another feather in it's cap.

DeskTop Office2 costs £79.95 (plus VAT). Existing users can upgrade for £10 (plus VAT) by returning the master disk. Call Minerva on 0392 437756 for more information.

Computer Concepts announce a winner

After much discussion and deliberation, Computer Concepts has announced the winner in its 1993 ArtWorks Clip Art competition.

The company launched the competition earlier this year offering a first prize of a stunning Cannon BJC-200 24-bit colour printer worth over £1600. Each entrant received a £10 voucher towards the cost of a CC product.

The competition didn't seem very popular in its early days and artwork just trickled in to its Hemel Hempstead HQ, but as the closing day neared, a torrent of submissions flooded the office and Concepts staff found themselves wading through over 700 entries. Many hours later, the 700 had been whittled down and after a great deal of discussion, a winner was decided. Mr. W. J. Briggs of Donaghadee, County Down was voted the overall winner with this fabulous image of a Kingfisher.

Concepts has now decided to produce a CD of ArtWorks clip art. It is expected to be available at the Acorn World show in October. Concepts is also expected to make another CD announcement soon. Call 0442 63933 for more details.

The winning entry

News Brief

CD snaps

Matt Black has released the PhotoLib CD, containing over 4,000 colour photographs from stock photo libraries, professional photographers and organisations. Intended for use in education and design, the images are stored in compressed JPEG format and each picture is up to 485 x 730 pixels in full 24-bit colour. Owners of Computer Concepts' or State Machine's video cards can view the images on screen in their full glory.

Drag and drop operated software is supplied with each CD ROM pack to enable Acorn users to convert the images into sprites and display them in a desktop window. These can be incorporated in all RISC OS desktop design applications and printed.

The PhotoLib CD costs £299, while there is also a range of Special Theme CDs available, for the same price. A floppy disk sample can be bought for just £5. Contact Matt Black on 0733 315439.

The net is closing in

Advanced Computer Services of Luton has announced one of the cheapest networking solutions for Acorn users. ArcNet incorporates the industry standard data transfer protocol of the same name to offer a low cost, high performance network system.

The ArcNet system offers greater speed than Acorn's Econet (ACS claims between 8 and 20 times faster) system but is not quite as fast as Ethernet, the industry standard. Using a token passing system, ArcNet offers fully buffered packet receival and transmission, a data transfer rate of between 2.5 and 5.0mbits per second and can be connected to existing Econet cables or standard network cabling. ArcNet also uses Acorn's new AUN software. The ArcNet interfaces can be fitted to any Acorn RISC OS machine by utilising the internal Econet connectors.

ArcNet is a cost effective network solution - the interface cards cost just £69 (plus VAT) each. Call ACS on 0582 20604 for more details.

The Acorn World Show will differ from Acorn User Shows in many ways

Is a faster A5000 on the cards?

The Show must go on

Acorn is ploughing a great deal of money and effort into organising its showcase exhibition, due to be held during October at the Wembley Exhibition Centre, London.

The theme of the show is 'A Vision for the Future' and it will contain a number of dedicated feature areas that provide a glimpse of the technological advancement of Acorn computers in various fields.

Kevin Coleman, the show's director, commented, "Acorn World will be the premier Acorn exhibition of 1993, presenting a totally new concept in computer shows. We believe that it will demonstrate just what can be achieved by a major manufacturer working closely with its partners and will set new standards for innovation and excitement."

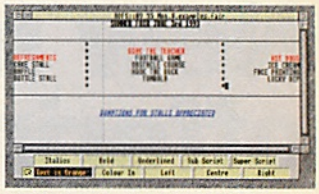
Acorn has stated that it will not be unveiling any "new technology" at its showcase event. The new technology term is meant to dispel rumours of the company launching its new workstation computer at the show. This, it is understood, will not become available until Spring 1994 at the very earliest.

However, rumour suggests that Acorn will launch a new, more powerful A5000 machine in time for the show. For the last year or so, it has been upgrading its base model machines with larger capacity hard drives. It is thought that Acorn is set to launch a new 32 MHz version of the A5000 utilising a faster ARM3 chip. Further speculation suggests that it may be supplied with 8Mb of RAM and will, almost certainly, incorporate the new FPA chip. It is not known how this machine will fit into Acorn's current product range.

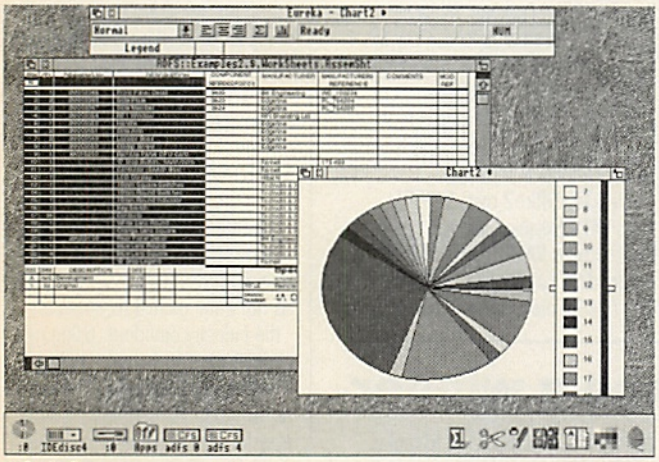
On the fly

Dixon and Dixon (nothing to do with the high street chain store) has announced FlyPrint, a handy application to produce flyers and leaflets on the Archimedes The company says that it is suitable for inter-office memos, numbered tickets, mailshots, compliment slips and more with production costs being as little as 25p for 100 flyers

FlyPrint costs £34.02 (plus VAT) and is available directly from Dixon & Dixon. Call 091 2853042 for more details and watch out for a review soon.



Fly print is the Buzz word



Eureka 2

Revised Eureka

Longman Logotron's flagship spreadsheet package, Eureka, has been revised and re-launched as Eureka 2. The new package retails at the same price as its predecessor - £119 for a single user copy.

Version 2 includes over 100 enhancements over the original including scaled printing of worksheets, zooming, user definable page breaks, multiple selection for charting, automatic loading of support documents, macro functions and improved worksheet linking. Registered Eureka users should have already received a free upgrade.

Contact Longman Logotron on 0223 425558 for further details.

Don't talk to strangers

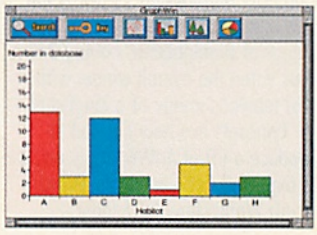
Stranger Danger is a new computer software pack from Appian Way, designed to reinforce safety messages for nursery and infant children, as well as develop a range of Keystage 1 cross curricular skills.

The pack comes with four disks and over 40 photocopiable worksheets. The main program takes the child through a scenario involving an approach by a stranger, who presumably is a bit of rogue because the object is to help the police apprehend him. The two activity disks involve such tasks as helping to match finger prints.

The pack was developed in association with Northumbria Police School Liaison and costs £15 plus VAT.

Also from Appian Way is Find It, an introduction to data handling for Keystage 1 and 2 pupils. The program has the normal database functions, but presented with clear, simple instructions and presentation designed to be gentle on young minds. Find It costs £29.95 plus VAT, with a site licence at £20.00 plus VAT. Datafiles are currently being prepared and will cost £6.50 each when available. A 28-day free trial is available, with demo disks.

For more information contact Appian Way on 091 873 1389.



supermarket.

Last week the Express reported on the complaints of

office told us that the management of Edgeley branch was not aware of

phone and the assistant manager on December 10 to make the views of the

store.

"The cage in which aluminium cans are stored was

SCHOOL CHILDREN PROVE THAT NEW BYPASS WILL DAMAGE THE LOCAL ENVIRONMENT

EXCLUSIVE

BY MATTHEW DAVIES

USING an innovative new program on their classroom computer children from St. Chad's School have shown town planners that a proposed new bypass would have a detrimental effect on their local environment.

The children surveyed the local area and fed details into their Topographer program, which allows them to look at the relevant area in 3D. They then added the new road along its proposed route and it became obvious that the road would not only affect an area renowned for its badger population but would also distract children in the classroom as they would be able to see traffic moving along the new road.

The children even went as far as to propose a new route for the road to the town planners. The proposed route would have a negligible impact on the area but still provide the much needed relief to existing roads.

A SERIES of sweeping proposals which would abolish free parking in district shopping centres, change some bin collections, increase lettings charges and scale down mileage claims by some council officers, have been announced by Labour.

In the first indication of their intentions sir
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● REDUCING mainten

Other econ
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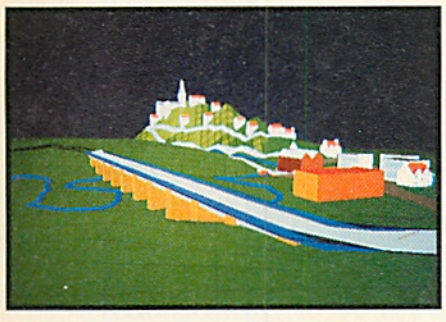
Th

Topographer is a major application for the Geography curriculum which allows children (and teachers) to have lots of fun whilst learning all about maps, contour lines, valleys, rivers etc. In fact *Topographer* covers virtually all items found on a map.

The real break through with *Topographer* is its 3D section which allows you to convert a 2D map into a 3D model on screen. Imagine turning a set of flat contour lines on a 2D map into a 3D model which clearly shows the hill — no more cardboard cut out models or papier mache! You define where you look from, and what you look at.

Topographer also covers aspects of the IT and maths curriculum with its modelling capabilities. Just stop for a minute and think of the projects that you could do with *Topographer*. You could make a map of the local area with churches, pubs, woods etc. and then view it from various places. If there is a bypass proposed you could add it in to the existing landscape and see where it is visible from and what impact it is likely to have on the community. I'm sure you can think of a hundred and one topics.



◆ Fully RISC OS 2 & 3 Compliant and 1 megabyte friendly ◆ Suitable for all ages from 6 onwards ◆ Easy and quick entry of all symbols (over 100) ◆ Wooded areas which translate into impressive 3D landscapes ◆ Definable map size and scale which can be linked to the national grid references ◆ Powerful 3D mode giving a true representation of the landscape ◆ Stunning 3D models which can be saved as a sprite file for use with other applications.

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TopicArt9 - Dinosaurs

Subjects available
1 - General
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3 - Costumes
4 - Entertainment
5 - Bugs 2 Slugs
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9 - Dinosaurs
10 - Symbols
11 - Tools

£8 + VAT per disc

11 TopicArt subjects are available now. Please specify when ordering.

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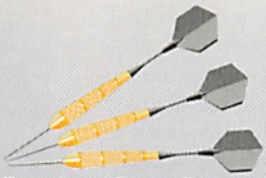

TopicArt7 - Sports Equipment

TopicArt4 Entertainment

SpecialArt £20+VAT (each)

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ColourSep software	£15

Can be used with DeskJets, BJ's,

QuickShow £25+VAT

!QuickShow
Video Titling
&
Slide Show Presentation
Has never been easier!

QuickShow is an easy to use slide show presentation and video titling package. It allows you to create a sequence of frames containing text of any colour with drop shadows, outline shadows and rubout boxes using outline fonts. Sprites can also be included in frames and positioned and resized as necessary. Once several screens have been created they can be linked together with the sequencer which allows you to fade each screen out and in with the many fades provided with the package. Completed sequences can be converted to a stand alone application which when run, automatically 'Shows' the sequence without using !QuickShow. 2Mb RAM required.

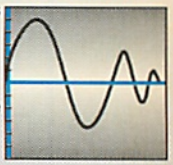
QuickTile v1.01 £25+VAT

Up until now it has only been possible to print posters from Draw & Sprite files. Now with QuickTile you can create posters from ANY RISCOS application. Simply enter the size of poster required & select PRINT from the application! QuickTile does the rest, printing each tile with crop marks & refs.

Requires RISCOS 3.10 or later.
Send v1.00 disc back for free upgrade.
Upgrade from Tiler for £ £15+VAT

QuickSnd £10+VAT

QuickS(ou)nd allows you to load, play, convert & resave existing samples. Armadeus, Tracker, raw data formats are supported. Samples can also be converted into modules for use with the sound system, Maestro, Rhapsody etc or converted into stand alone Utility sample modules which when called, via a star command, loads the utility, plays the sample and then removes itself completely from memory. Special effects which can be applied to samples include Reverse, Echo, Max Vol, alter replay rate and resample at other frequencies. QuickSound is perfect companion to the Oak Sound Recorder.



Hardware, Software & Books (All prices exclude VAT)

Pocket Book/Psion

Acorn Pocket Book	£212
Psion 3 256k	£185
A-Link for either of the above	£51

A3010 Series

With Free 3yr Warranty & On-Site Maintenance

A3010 Family Solution	£424
A3010 Lrng Curve Sys	£680

A3020 Series

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A3020 Floppy System	£749

As above less Lng Crv & joystick prts

A3020 60MHD System	£899

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Add £50 for MultiScan Monitor

A4000 Series

With Free 3yr Warranty & On-Site Maintenance

A4000 Home Off. Sys	£999

2Mb RAM, Floppy Drive, 80Mb hard disc, std mon, EasiWriter2, database.

A4000 80MHD System	£949

Add £50 for MultiScan Monitor
For 1Mb 386 PC card add £250
For 4Mb 486 PC Card add £450

A5000 Series

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A5000 Lrng Curve Sys	£1445
A5000 2M80HD Sys	£1399
A5000 4M120HD Sys	£1599

Add £175 for Microvitec CubScan 1440 Monitor

Acorn A4 Series

Free TrackBall & SpareBatt

A4 4MHD Portable	£1699

Finance 28.9% APR

Finance is available on all Acorn hardware, subject to status. Ring for details. 13.75% APR finance avail. on Acorn Assist Scheme. Special offers do not apply to finance or Assist Sch.

Monitors

Acorn Standard/MultiScan	£199/£249
Microvitec Cub Scan 1440	**£399**

0.28dp, 40 presets & 3yr Warranty

Hardware Upgrades

ARM3 (25MHz)	£175
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Joystick Interface (all m/c's)	**£32**
Midi Expansion Card	£65
Scanlight 256	£199
ScanLight Professional	£549
Vision Digitiser Mono Int	£48/Ext £60
Vision Digitiser Colour Int	£76/Ext £89

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A3000 Up to 2 / 4Mb RAM	£45/£105
A3010 Up to 2Mb / 4Mb	£35/£139
A3020/A4000 Up to 4Mb	£65
A5000 Up to 4Mb	£79
A400 RAM	£35 per Mb

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250Mb 13ms Cache	£420
IDE A3000 Internal Hard Cards	
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120Mb 18ms Cache	£475
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128Mb Internal Mag-Opt Drive	£699
External case for above	£69
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BJ-300 Ink Cartridge	£11
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Canon BJ-10sx / Turbo	£179/£215
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Canon BJ-230 / Turbo	£309/£345
Canon BJC-800 Turbo	£1299
HP DeskJet 500	£299
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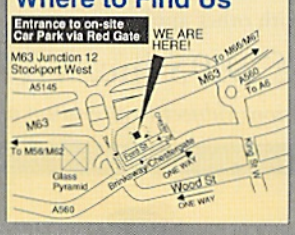

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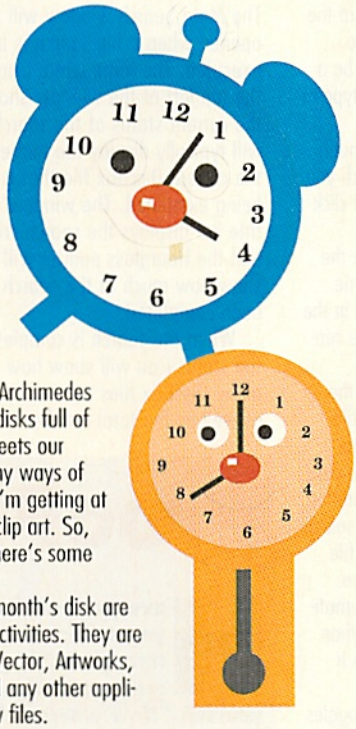
SEP 93

DISK WORLD

Your guide to this month's cover disk

Clipart

More artwork to include in your own documents



Clip Art is one of those areas of computing that never seems to cease growing. The problem is, if you sit down to design some clip art, you're likely to be stuck for something to draw. When an idea comes, no matter how good it looks when finished, it is unlikely to be quite what a user is looking for.

This is exactly what happens here in the Archimedes World office. We've got disks and CD ROM disks full of clip art, but can rarely find something the meets our needs exactly. That's because there are many ways of depicting every scene. I suppose that what I'm getting at is the fact that you can never have enough clip art. So, using that as perfect reasoning, here's some more clip art for your collection.

The range of Draw files on this month's disk are ideal for Infant and Junior class activities. They are compatible with Draw, Vector, Artworks, Impression, Ovation and any other application that accepts Draw files.

Simone

Save over £14 with EFF and Archimedes World

Yes, just loading the !EFF directory of this month's cover disk will save you money. Archimedes World and The Electronic Font Foundry has teamed up to give you a free font.

Installing your free font

Installing the Simone font is very easy, thanks to EFF's application, DemoFont. All you need do is insert a disk that contains your !Fonts directory and get a filer window of it on screen. The computer has now 'seen' this and will remember where it is stored. Now, click on the DemoFont icon from the Waiter menu and the font will be installed in your !Font's directory.

If you were running any applications that use fonts before installing Simone, you may find that they will not have registered its existence. If this is the case, you should quit the application and re-load it. Simone should now be available.

Image Bank

A demo version of Irlam's latest product to keep account of your pixels

As we enter, albeit slowly, the realms of 24-bit graphics on the Archimedes, there becomes a great need for larger storage devices or better compression techniques. One of the most popular and effective compression algorithms is JPEG, where the image quality is degraded by removing adjacent pixels to shorten the file size. This system can be tailored to your needs as you can specify the amount of compression you require and the software pulls the pixels as it sees fit.

Irlam has cashed in on this technique and incorporated it in a new product that not only compresses the images, but also allows you store them together within the application in a 'bank'. When you come to look through your images at a later date, Image Bank will also decompress them and allow you to save them as a sprite.

Loading

Image Bank occupies very little memory and, because this demo version is not capable of saving, it is not necessary to remove it from the cover disk in order to run it.

Image Bank is a fully multitasking application that can be run by clicking on its icon from within the Waiter menu. Its icon will be installed on the icon bar and it is ready for use.

Using

Image Bank operates rather like a standard filer window. It displays its stored images as thumbnails and this can be toggled to show even smaller images with related info using the Full Info option that is available from the Display option of the main menu.

Double click on an image and the save box appears. This allows you to save the image to disk (not the cover disk) as a sprite. Simply drag the save icon to a filer window to perform the function.

The save box also allows you to save the image with an optimised palette or as a grey scale. These options should be used to make the most of any supplementary video card that you have installed.

By accessing the main menu, you can also save the image in its original JPEG form.

For more information on Image Bank, please refer to our exclusive review in this issue.

DBFind

A handy searching application for DiscBox

REQUIRES THE DISK BOX APPLICATION

Tired of searching through loads of disks, one by one, looking for a file? Tired of looking for disks with enough free space available to store a new program? Need help to organise your disks more? DBFind could be the help you've been waiting for. DBFind is designed to be used alongside DiskBox, which was supplied on the August 1993 cover disk.

It is advisable that you familiarise yourself with the use of DiskBox before embarking upon DBfind. You should also keep all your DiscBox files in the same directory (e.g. DBFiles which is in the !DiscBox application directory), as this can then be used as the Search Directory which will be described in more detail later.

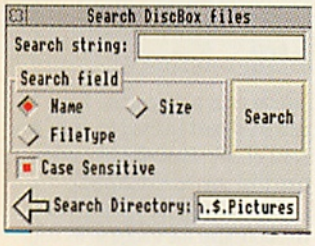
Loading

Before loading DBfind, you must decompress it and copy it to another disk, preferably the same disk that holds the DiskBox application supplied on the August 1993 cover disk. Do not attempt to copy DBFind onto the August 1993 cover disk. Although DBfind works in conjunction with DiskBox, it is not necessary to have DiskBox loaded.

Load DBFind in the usual way by double-clicking on its icon from a filer window. Once loaded, the DBFind icon will appear on the right hand side of the icon bar.

Using DBFind

DBFind is accessed via its icon bar menu. Click with the Menu button on this icon to display it. The menu has four options, with the first and last being Info and Quit as standard.



Searching

Selecting the second of the four options opens a new window entitled, Search DiscBox files. This has an editable icon to enable you to enter a search string. Click on this area and the caret will appear at the mouse pointer, ready for you to enter the search text. This can be a filename, or part of one, a filetype or a file size.

DBFind is not intelligent enough to decipher which type of search you wish to make and so you must click on one of the buttons below it.

The Name button will cause the search to check for any file name that contains the text specified in the search criteria. This can be case sensitive or insensitive as required.

The FileType button causes the search to be carried out on all filetypes that are stored in the database. As with the Name option, case sensitivity is taken into consideration.

The Size button causes the search to be carried out on the actual file sizes of the files in the database. This search can combine mathematical figures such as the greater than and less than symbols to make it more flexible.

The Case Sensitive button toggles the case sensitivity on and off. Only Name and File Type searches can be case sensitive or insensitive.

The Search Directory area of the window is used as a drag area. In order to get the program to search the correct files, you should drag the relevant directory that contains your DiscBox files to this area. It does not matter if this directory contains sub- directories, but, if DBFind encounters any file other than a DiscBox file in these directories, it will cause problems. As an alternative, you can simply drag individual DiscBox files to the Search Director icon.

Only when the Search Directory has been specified as described above will the search button become active. Once you have checked that your search criteria are correct, you can click Select on the Search button to start the ball rolling.

The results of a search

The Main Search window will be opened when a file search is being executed. The large white icon at the top left of the window shows the current status of the search and will typically display the name of the current DiscBox file that is being examined. The window's title bar displays the search criteria and the Hourglass pointer will show how much of the search has been completed.

When the search is completed, the status icon will show how many DiscBox files were searched as well as the total number of records and the time that the search took. It will also show the total number of records that were found to match to the search string as entered and the current record being shown.

Clicking Select on either the Next or Prev icons will cycle through all records that were found to match the search specifications. Clicking the Menu button over this window will open a menu giving further options enabling you to save or print the current record or all matching records as a text file. DBFind makes use of Standrad RISC OS printer drivers and a suitable driver must be loaded before the print option can be used.

The All Records option toggles between acting upon the current record or all matching records and affects the Save as Text and Print options detailed above. You should be aware that that this option has

ProcFunc

Have you ever found yourself looking through BASIC programs and saying to yourself "Now where did I put that procedure?". If so, this application simplifies the whole process - all you have to do is give it a BASIC program to chew over and it returns with a list of all the procedures and functions that are contained within it.

Loading

ProcFunc is a multitasking application that will function from the desktop in the usual way. Before loading, it is advisable to make an uncompressed backup copy of the program for safe keeping. See the instructions under the heading 'If you have a problem', for details.

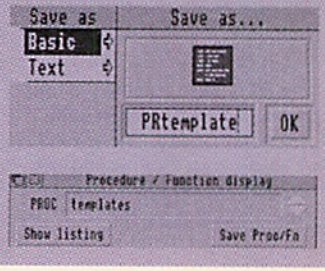
To load ProcFunc, either click on its icon in the Waiter menu or double click on its icon from a Filer window. Either way, the program should load and its relative icon will appear on the right hand side of the icon bar. It is now ready for use.

Using

The program will spark into life when you drop a BASIC program file onto its icon on the icon bar. This causes the main window to open which displays two scrollable windows within it. These show the procedures and functions that were found to be present in the BASIC file. The program's original filename is given at the top of this window.

Clicking on any of the procedure or function names causes a new window to open. This displays the procedure or function in full and it is possible to extract this code from the program and save it using the Save Proc/Fn icon.

Clicking on the Show Listing button will open a window after a period of time (the period of time dependent upon the size of the procedure



no use in the Search for Free Space window that is covered later.

If you wish to 'Save as Text' directly to another application such as Edit, you must ensure that either a !System or !Scrap application has been seen by the Filer.

Searching for free space.

The Search for Free Space option from the main icon bar menu causes a new window to appear. This window has a writable icon to enable you to enter the amount of disk space which you require. The figure should be specified in kilobytes, though it is not necessary to enter KB, a figure is sufficient. Thus, entering 100 will search for disks with at least 100Kb of free space.

The Search Directory area of this window operates in exactly the same way as for the Search DiscBox files window. Please refer to the relevant text above for details.

Once you have specified a Search Directory and entered a search criteria, you can click on the Search button to initiate the function.

A new window will open with the icon at the top displaying the current status. This details the current DiscBox file being searched. The Hourglass pointer will also give

an indication of progress.

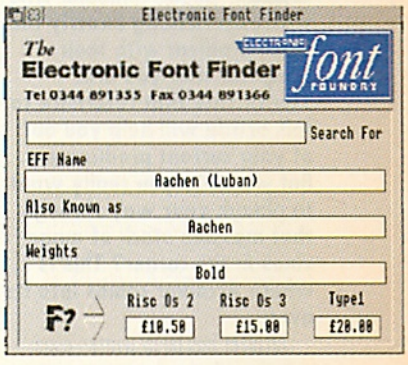
When the search is complete, the status icon will show how many disks were found to match the search criteria. Each disk's name, reference and amount of free space will be listed in the window below. Clicking with the Menu button over this window opens the menu described in section on the Main Search Window above.

Hints on using DBFind

To shorten the time taken by a search, copy the whole directory containing all the DiscBox files (the Search Directory) to a RAM disk and work from there. This can reduce the search time by as much as 40 percent.

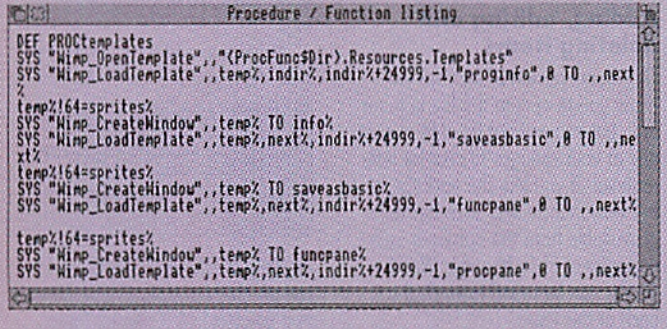
Addendum

If the DiscBox application has been seen by the filer, the DBfiles directory inside its directory will be used as the default search directory in DBfind. For this reason, I would strongly recommend that you keep



all your DiscBox files in this Directory and keep DiscBox and DBFind on the same disk.

So that DBfind can be used effectively, you must use Discbox to keep all your Discbox files up to date. If you add another file to a disk or delete a file for example, update or renew the corresponding Discbox file for that disk.



or function) so that you can see whether it is actually the procedure or function you are looking for.

It is also possible to search through the list of procedure and function names by clicking with Menu anywhere on the main window and selecting the Search option from the menu.

This will open a dialogue box in which you set the string you wish to search for. You can also specify whether the search string is contained within a string, begins with the search string, ends with the search string or the search string given is the full name of the procedure or function that you wish to search for. You may also set whether the program is to look only for procedures, functions or for both.

After clicking on Search, the application will tell you how many matches it has found by displaying the result in the bottom left hand corner of the window. If the search has been successful, clicking on the Show Results button will open another window (described earlier) from which you will be able to save the procedures or functions. If you now look at this window, you will notice that the two arrow icons on the right hand side of the window will be unshaded. This will allow you to cycle through the list of procedures and/or functions that the application has found which matched your search criteria. Each of the procedures and functions found will be able to be saved as before.

Parameters

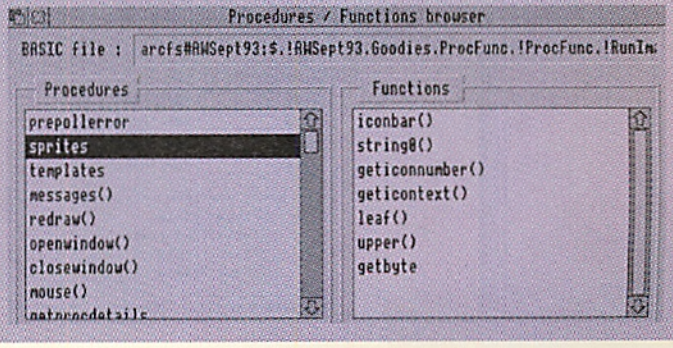
It should be noted that if a procedure or function takes parameters from elsewhere in the program, these are not shown. Instead, the procedure or function name is shown, followed by and open and close bracket, indicating that the procedure or function takes parameters.

The icon bar menu

The icon bar menu contains the usual Info and Quit options with a further option - Dragging. This this will be grey-out for users of RISC OS2 unless you have a copy of the Drag-A-Sprite module present in your machine. If this option is active, you will have access to a submenu that will allow you to specify whether to drag either a sprite or a bounding box during the save operation. Initially this is set to Sprites.

Known problems

The only known problem to date is in showing the listings for long procedures and functions that occur at the end of *very* long programs (130K plus at least). Unfortunately, the last few lines do not appear but are not lost when you save the procedures or functions to disk.



Archiver

Back in your dim and distant past you can remember reading about someone who was experiencing exactly the same problem with their computer that you are. You're sure that reference to this article will help you out of your current predicament. But wait. Do you really want to plough your way through that massive stack of magazines in the corner? This is where Archiver comes into its own.

Archiver has been written especially for indexing magazines, journals or books, although it can be applied for indexing almost anything. Each entry in this dedicated database consists of four text fields and two topic selections from a pre-set list. A third optional topic can also be used.

Loading

This demonstration version of Archiver has no save option and it is therefore not necessary to make an uncompressed copy to another disk, although it is still recommended for security.

Click with Select on the Archiver icon in the Waiter menu, or an Archiver file from a filer window. Its icon will appear on the right-hand side of the icon bar after loading.

Using

Locate the sample file supplied on this month's cover disk and load this by either double clicking on it or dragging it to the icon on the icon bar. This demonstration file contains data on all the issues of Archimedes World for 1992.

To browse through the records, choose 'Browse' from the icon bar menu or click with Adjust on the Archiver icon. When the Browse menu appears, click on the left and right arrows to move through the records. In the Goto submenu of the browse menu (click Menu over the browse window) are options to move to the first item, last item, next and previous items.

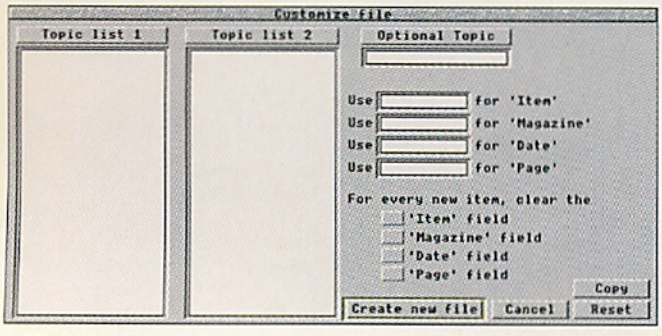
Where is it?

By selecting the Find Item option from the browse or icon bar menus, or by clicking on the Archiver icon on the icon bar with select, the Find window will appear. Enter the text that you wish to search for into the text entry box at the top of the window. To choose the actual field that will be searched, click on the respective button beside the two writable icons below and a long list of fields will appear. The search is not case sensitive and will search for the string within the text field, so you can enter only a small portion of the string rather than remembering the whole title.

Below the text entry boxes are two further text boxes. Clicking on the cross by one of these boxes will cause it to become active. Clicking on the arrow will display a menu of topics. Choosing a topic causes it to appear in the box. When a box is active, Archiver will only look up items relating to that topic. This same is true for both boxes, even though they have different entries. To switch it off, click on the tick - it will change to a cross and the box will become greyed once again.

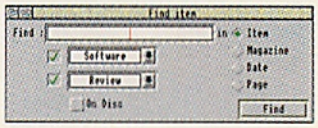
The optional topic at the bottom of the dialogue box can be selected so that only items with that topic selected will be looked up. When it is not selected, any item will be examined, regardless of whether it has the optional topic selected or not.

When the search has been selected, click on the find button. Once the search is finished, a window will appear containing the matches found. By leaving the text entry box blank, searches can be performed for items relating to a particular topic.



Setting options

The method by which searches are performed can be controlled from the options dialogue box. This can be found on the icon bar menu, which



allows you to select whether you want the matches shown or only to be informed when the search is finished. You can also create a log file.

A log is a text file containing all the matches found in a search. The file is saved into a subdirectory inside the !Archiver directory. The log file can be stored in two formats. To open the log file directory containing the saved log files, choose 'Show logs' from the icon bar menu.

Adding, editing and deleting items

This demo version of Archiver will allow you to update the file in memory - but you will not be able to save any of your changes to disk for later retrieval. If you like the package, a full version including Save functions is available from the Software Sale department of Archimedes World. Details can be found towards the back of this issue.

To update your catalogue select the Add Item option from either the icon bar menu or browse window menu. Fill in the text boxes and choose two topics from the lists (as in the find dialogue box). Finally, select the optional topic if it applies. Click Select over the add button and the item will be appended to the end of the file.

If you select the Add Item option from the browse window menu, the insert button will be active. If you Select this, the new item will be inserted ahead of the one currently displayed in the browse window.

To edit an item, display it in the browse window and Select the Edit Item option from the browse window menu. Alter the item and click on the add button.

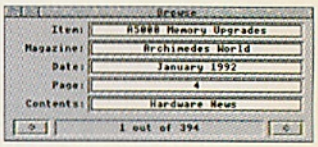
To delete an item, display it in the browse window and choose Delete Item from the browse window menu.

Creating a new file and customising

Our demo version of Archiver does not allow you to create your own magazine databases. However, you can experiment with the functions before you choose to buy. If you want to experiment with the creation of your own files then proceed as follows - don't forget you'll not be able to save your work!

To create a new file, open the dialogue box from the file menu on the icon bar menu. To create a new file like the current one, choose Copy from the window that appears. Details of the loaded file will appear in the appropriate places. Select Create New File if you want to keep it the same, otherwise continue reading.

To alter or add topics to the lists, type them into the large white boxes

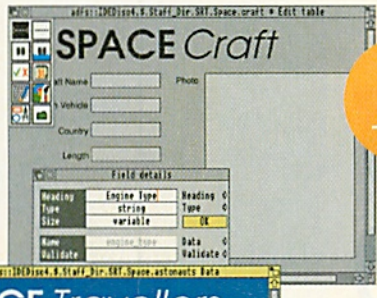


on the left side of the window. To use an optional topic, type it into the text box marked Optional Topic. Below this are four text boxes. These contain the names to be used for the fields when entering data. Below this are four options that control which fields are cleared when entering a new item. For example, you could set it so that the page number and item title fields are cleared, but leave the date and magazine fields intact from the last entry, when entering new data. By clicking on the reset button, all text boxes and options are cleared. To create the new file, click on 'Create new file'. To cancel the dialogue box, click on 'Cancel'.

You should now be familiar enough with the program to search through our example database and see most aspects of the program.

it's this easy with

Squirrel



1

Create Mode

Build new databases with just a few mouse operations. Never before has table creation been this quick and easy. Squirrel is a no limit product! There are no limits to the number of characters in a field, fields in a record, or records in a table. Both single and multi line text fields are supported. File definitions may be changed at any time.

2

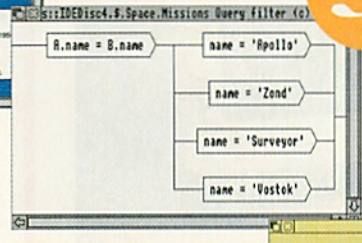
Data Mode

Store images, text and sounds within each record to create powerful multi media databases. Browse through the database in any field order.

3

Query Mode

Squirrel incorporates a radical new graphical approach to creating complex queries – a series of INCLUDE and EXCLUDE filters are linked to form a graphical flowchart. Squirrel is fully relational, allowing data from multiple databases to be joined in one query or report.



4

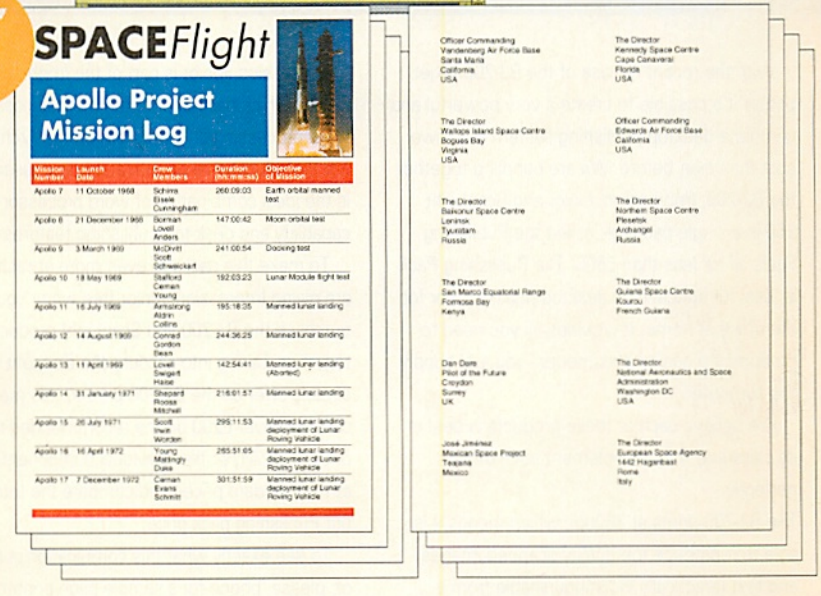
Query Data Mode

Browse through results of queries on screen Query definition may be saved, or query data may be re-indexed as a new table.

5

Reporting

Include Sprites and Drawfiles in reports to produce desk-top publishing quality output Powerful label printing allows multiple labels across the web.



What the press say...

"It has leap-frogged all the database development of the past 10 years and emerges as the pre-eminent data storage system for the Arc."

Steve Turnbull, Micro User

"The ease of table creation, data entry and browsing, searching and sorting place this innovative software in the first league."
"No other product approaches the performance of Squirrel at anything like the price and it is to be highly recommended."

John Schild, RISC User

"Probably the ARC DBMS most in touch with current trends in database development."
"You are going to need Squirrel which is easily the most powerful database available today."

Archimedes World

Squirrel Single User	£ 129.00 + VAT
Squirrel multi user/Site Licence	£ 516.00 + VAT
Squirrel 'C' Developer's Toolkit	£ 99.00 + VAT

digital services

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A very powerful and complete
DESKTOP PUBLISHING SYSTEM
at a lower cost than ever before...

Publishing Pack

FOR THE ARCHIMEDES

With the recent release of the BJ-200 inkjet printer it's possible to create a very powerful and complete desktop publishing system at a lower cost than ever before. We are bundling together the BJ-200, Impression Junior and ScanLight 256 in a single package, called the Publishing Pack, all for less than £500. The Publishing Pack is ideal for educational desktop publishing or for the office at home. It provides all you need to produce top quality documents - you just supply the computer.

We believe each of these products is best in its class and they complement each other perfectly.

The BJ-200 prints at 360dpi, which means it is able to reproduce top quality scanned images and text (practically indistinguishable from a laser printer) and thanks in part to the TurboDrivers it is also the fastest printer in its class.

ScanLight 256 can capture photographic quality images and is supplied with software that provides image enhancement capabilities. This is the simplest way to get quality pictures into your documents

Impression Junior is part of the Impression family, which has become the most successful word processing/DTP program on the Archimedes. For the educational or 'office at home' user Junior is the ideal combination of word processor capability and desk-top-publishing features.

To make this package even more attractive we are giving Impression Junior free when you purchase the BJ-200 and ScanLight products together. Taking into account the discount we already offer on the BJ-200 printer, this means you can save over £200 on the recommended retail price (inc VAT) of the individual components. Look at the standard prices and compare the total with our Publishing pack price.

To see exactly what this combination is capable of, please 'phone for a sample page printed on the BJ-200, produced using Impression Junior and containing an example ScanLight scanned picture. Full details are also available on the individual products.

Finally, just in case you are not completely satisfied with the system, we offer a 14 day, no-quibble, money back guarantee.

The normal MRRP of the products in the Publishing Pack:

BJ-200 Printer	£329.00
ScanLight 256	£199.00
Impression Junior	£89.95
Total	£617.95
VAT	£108.14
Total incl. VAT	£726.09

Our special bundle price:

Publishing Pack	£475.00
VAT	£83.12
Publishing Pack incl. VAT	£558.12

Add £10.00 +VAT Carriage

2Mbytes RAM recommended. Compatible with all Acorn computers. The ScanLight scanner requires an interface board to be installed inside the computer - we can provide versions for all Archimedes computers but please specify which computer when ordering.

Computer Concepts Ltd

GADDESDEN PLACE HEMEL HEMPSTEAD HERTS HP2 6EX TEL: 0442 63933 FAX: 0442 231632

Spricht

Accent access

Accessing special accented characters for German, French, Spanish and other foreign languages can be a bind. Users of RISC OS3 have the Chars application at their disposal, but this makes it hard to see which letter you are trying to get and the characters are laid out in the order which they are stored in ROM, not in a hierarchical table. For RISC OS2 users, the only option is to use the Alt keys and look up the code number in the user manual. For both OS users, this program will prove indispensable.

Spricht allows the user to access accented characters necessary for communication in foreign languages, quickly and easily. To give it greater flexibility, Spricht can also be programmed to show a set of user characters, making access easy for any language which uses characters stored in one of the sets in ROM.

Loading

Spricht is a multitasking program that will work alongside others on the iconbar. It should be copied, in an uncompressed format, to a blank disk before being used, especially if you intend to modify the program to add your own user sets.

Load Spricht by double clicking on its icon from a filer window. The application will load and installs its icon on the right hand side of the icon bar.

The Menu Options

Spricht has just a few options available from its main menu, available by clicking the Menu button over the iconbar icon. The usual Info and Quit boxes adorn the top and bottom of the menu structure respectively with the following functions nestled inbetween: German, French, Spanish, User and Save Data. Selecting the German, Spanish, French or User options puts Spricht in that particular language mode. The Save Data option stores the current user character set on disk for later use.

Before opening the main window, you should ensure that Spricht is in the correct language mode, as shown in the main menu.

Using

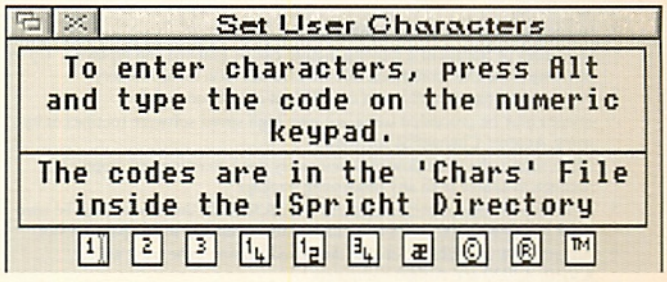
Click on the iconbar icon with the Select button to display Spricht's main window.

Defining the User Set

To begin designing your own character set, you should use the main menu and access the 'Set User Characters' box by moving the mouse pointer off to the right of the User option.

Select the character you wish to redefine by clicking on it with the Select button and delete it using the Crtl and U keys. Now, type in the character code. To do this you should hold down the Alt key and type in the ACSII code on the numeric keypad. This will not work if the Numlock key is not illuminated.

A complete list of codes and their relative characters is supplied with the program. To access this, open the !Spricht directory by holding down Shift and double-clicking. You will see a text file named Codes. Double click on this to view the codes.



Once you have defined your new codes, save them using the Save Data option from the main menu.

The Greek Alphabet

To replace the special characters with Greek characters press F12 and type the following at the * prompt:

```
Alphabet Greek
```

Alternatively, if you want to change the configured alphabet type

```
Configure Alphabet Greek.
```

To change back to the original setting use one of the following commands depending on how you changed it in the first place.

```
Alphabet Latin1
Configure Latin1.
```

You should note that changing the Alphabet to Greek will prevent German, French and Spanish character windows from working correctly.

Possible problems

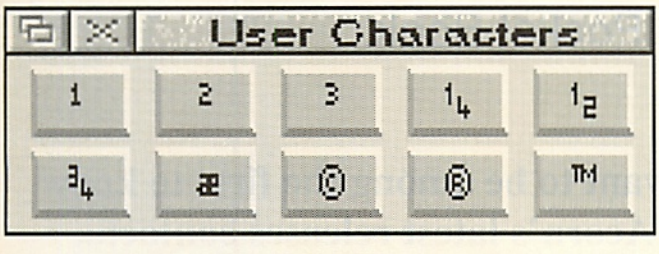
You will be unable to define any special characters in the User set yourself if the InternationalKeyboard module in your computer has been unplugged. To check this, press f12 and type the following at the * prompt:

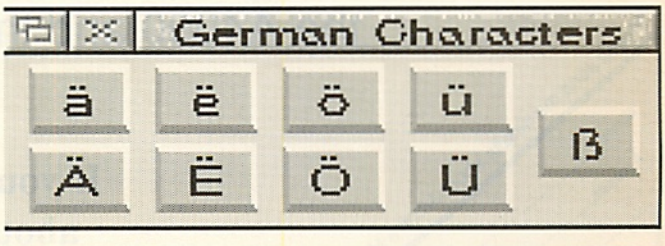
```
Unplug
```

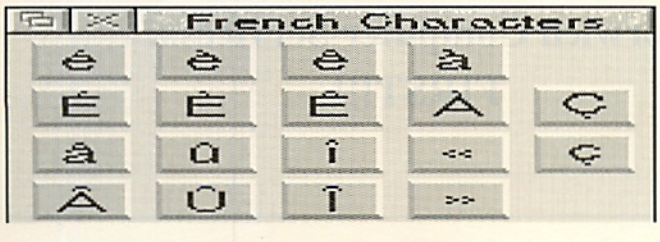
A list of all modules that are currently unplugged will be displayed. If the InternationalKeyboard module is in this list, you should type the following, also at the * prompt:

```
RMREINIT
InternationalKeyboard
```

You should now perform a Control-Break reset and start again. You should now have access to international characters via the keyboard using the Alt button.







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The Pineapple Colour Digitiser

Since we originally introduced the Pineapple Video Digitiser over two years ago we have not needed to modify the design of the hardware in any respects. However, the software has been continually improved to the point where the quality and quantity of software supplied is second to none.

Because we are so confident that you will find the Pineapple Digitiser superior to anything else available, we offer a full no questions asked money back guarantee. Some of the features of the Pineapple Digitiser, many of which are still exclusive are as follows:-

* 16 Bit true RGB storage in 256k Ram
* Sequences of frames of a moving picture can be grabbed and replayed. Up to 30 frames in a 1Mb computer, 200-300 frames with more memory!
* Full screen area normally seen on a TV set is grabbed in full
* Images may be processed using our own high speed software routines or by using Acorn's ChangeFSI software
* Quite simply the most powerful and easily used zooming and cropping routines available with any processing package
* Available in stand alone box for use with A3000. In this mode it can be used with A300/400/500 series computers only occupying one expansion slot
* Adapter now available to enable the boxed version to be used with A3010, A3020 and A4000 computers.

A300/400/500 £199.00 +vat

A3000/Boxed £235.00 +vat

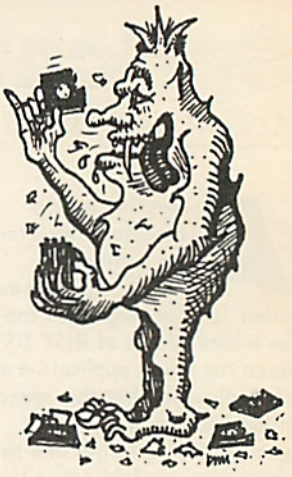
Internal / External Expansion Adapter

This new product from Pineapple is an internal expansion card for the A3000, A3010, A3020 & A4000 computers which provides an external expansion connector similar to the A3000. In the case of the A3000 this then provides two expansion slots, and for A3010, A3020, & A4000 a single external expansion. This enables external devices such as our Video Digitiser to be used with A3010,A3020, & A4000 computers. All address and data lines are fully buffered.

MEA/2 £28.00 +vat

!KILLER

Removes ALL known VIRUSES



Don't take chances with your valuable software. Use the program that Acorn themselves use to check for viruses.

!Killer, together with VProtect will detect and remove all of the 46 viruses which are currently known. Because new viruses are being discovered all the time our virus protection scheme will provide you with 3-4 updates of the software each year. We can also offer immediate advice by telephone.

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Breakfast	*CeBit*	*Code*	*Ebenezer*	*EMod*	*EX_port*
Extend	*ExtendV2*	*FCodex*	*Funky*	*Garfield_I*	*Garfield_W*
Handler	*Icon*	*Image*	*Increment*	*IRQFix*	*Link*
Mode87	*Module*	*MyMod*	*NetManager*	*NetStatus*	*NewDesk*
Parasite	*Penicillin*	*Poltergeist*	*Runopt*	*Sprite*	*SpriteUtils*
Tasmanager	*T2*	*Terminator*	*Thanatos*	*TrapHandler*	*Valid*
VanDamm	*Vigay*	*Whoops*	*Wimpman*		

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Archive Magazine was first to publish full technical details of

the A5000, the A4, the A3010, the A3020, the A4000 and the Pocket Book...

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Address.....

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AW

If you want to be among the first to know about Acorn's latest releases contact...

Norwich Computer Services...

FIRST!!!

if you have a problem

There are sometimes minor problems that crop up on the cover disk that prevent readers from using some of the software. Often, these problems are simple to solve. To save you the time and trouble of writing in, here are a few of the most common questions and the solutions to them.

System resources cannot be found

The filing system has not 'seen' the System folder. This contains the shared resources which RISC OS requires in order to run many applications. It can be found on Applications Disk One as supplied with your computer. If you have not made a back-up of the System folder, copy it to another disk now for safe keeping. If you are using a hard disk, you will probably already have System in the root ($) directory of this. If the error occurs in this instance, display a filer window for the hard disk and try again.

System or Path cannot be found

See above explanation.

You need Clib 3.75 or later

Clib is the shared C library for RISC OS. It is stored in the System.Modules directory. If you experience this error, you will need to obtain a copy of Clib 3.75. Many commercial software packages will have it. If you are running RISC OS3 or later, you will already have a copy of Clib 3.75. It can also to be found in the System directory update on the June 1993 cover disk.

To find out which module versions are in memory, press F12 and type Help Modules at the * prompt.

Cannot find scrap directory

The scrap directory is a temporary directory which RISC OS uses to store temporary files. This is set up in the System folder by the Wimp$Scrap command. The error will occur if the System folder has not been 'seen' or the Wimp$Scrap command is not present.

Decompacting software

Some programs will not function correctly from the cover disk under certain configurations. If you find that a program fails to work, try decompacting it to another disk. To do this, make use of the Open Viewer options in the Waiter menus. These open standard Filer Windows that display the applications and associated files in an uncompressed state. Simply open a new window for a blank disk, hard disk or RAM disk and drag the files you wish to copy to the new window. The copy process will take place and you should reset the computer before attempting to run the copied files. (Note: If you copy to the RAM disk, you will need to make a physical copy to another disk before resetting the computer as you will loose the data.)

Disk Errors

Archimedes World offers a full disk replacement service for cover disks that are found to be faulty. If you suspect that a disk has errors, insert it in the drive and perform a Verify function on it by selecting the Verify option from the icon bar menu of the floppy icon. If the verify function reports errors, the disk should be returned to the address below for replacement. Also, if the disk is physically damaged, we will be happy to replace it.

Please do not return disks that report other errors, as a direct replacement is not likely solve the problem.

Cover Disk Returns,

Archimedes World,
Argus House, Boundary Way,
Hemel Hempstead, Hertfordshire,
HP2 7ST

Question

What makes the Archimedes World cover disk the best possible buy for all users of Acorn RISC OS computers?

Answer.

Your software.

Since its launch, Archimedes World has, month after month, provided readers with software of a quality that exceeds that available in the public domain. Our software is often novel, useful or entertaining, but never poor.

The authors of our software have all become richer as a result of their efforts - and you could too.

We are looking for quality software for publication, both on the cover disk and through our Software Sale department. We want to see your programs.

All software should be accompanied by a completed Program Submission Form (to be found on the back page of each issue and as a text file on the cover disk) and a stamped, self addressed envelope for the return of your disk, should we not accept the software. Without a SAE, we cannot guarantee the return of your disk.

All software should be fully documented in a text file on the disk. We have a skilled team of product assessors to examine your software and can offer advice on how to improve your software with ideas and programming tips and suggestions.

We want

General Utilities
Productivity applications
Printer Drivers
Clip Art
Fonts
Art programs
Programming utilities
Educational software
Simulations
Music software
Games
Any other ideas?

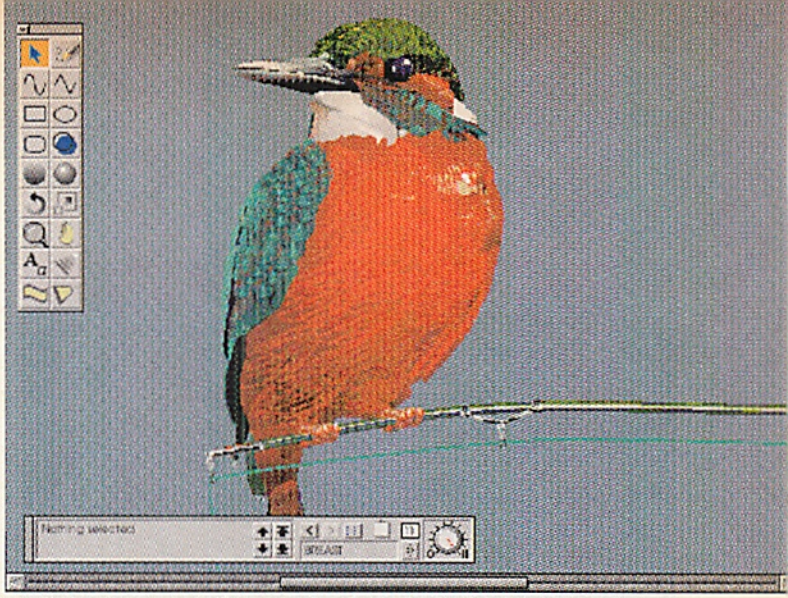
Procedure

Under normal circumstances, it can take up to six weeks for us to reply to your submission. It is rare that software is accepted as originally sent, as we have a few guidelines which need to be met. Therefore, it is usual for us to request a few changes with a view to publishing the software. Such changes are usually quite minor but often ideas will be given to spice the software up and make it more appealing.

We regret that we are largely unable to answer telephone queries regarding submissions as all evaluation work is performed outside the magazine office and often outside normal office hours.

Please send all submissions to:

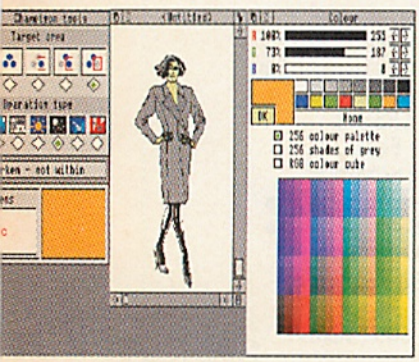
Program Submissions
Archimedes World
Argus House
Boundary Way
Hemel Hempstead
Hertfordshire
HP2 7ST



ArtWorks is the most powerful illustration package do date. Here it is showing the winning entry in the CC Clip Art competition

What is DTP?

A quick rundown of the Acorn DTP scene uncovers more than you'd think



Chameleon from 4Mation is a handy application that allows you to easily alter the colours of a Draw file

Vector is a powerful vector graphics drawing package, with a good many useful features

The question raised in the title of this article is one that a lot of people think they know the answer to. Ask someone the question and you are likely to get the answer: "Well, it's like page make up on screen. Newspapers and magazines type stuff."

Although this is true, is doesn't cast a true picture of the DTP scene. The idea of desktop publishing was originally conceived as being the electronic answer to the cut and paste method of laying out magazines and newspapers, but human intelligence has devised many hundreds of new uses, most of which will not immediately spring to mind.

If music be the food

Desktop Publishing now takes many forms. Sure, if you ask an Archimedes user to name a DTP package running under RISC OS, you are likely to get the response Impression II or Ovation. If the user is also in education he or she might mention Desktop Folio or the eagerly awaited Bookmaker.

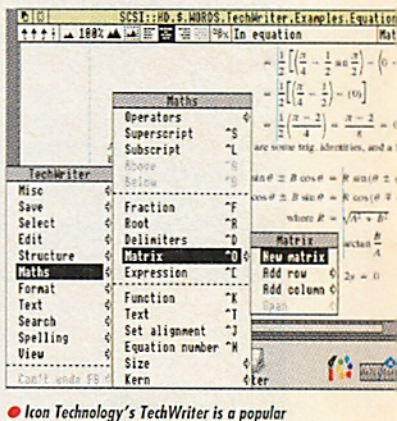
But hold on, what relevance does the above sub-heading have? Music publishing is a fast growing business and products like Score Draw and Rhapsody II are big business, so big in fact that Clares is gearing itself up for the launch of Rhapsody II. These packages come under the umbrella title of DTP as they can both produce printed music which can be manipulated electronically.

It is now this concept which is at the heart of the term Desktop Publishing, rather than the original meaning of page layout.

Educate

Desktop Publishing in education establishments has the potential to save schools and colleges an awful lot of money. Quality products now exist which strive to enable the user to produce professional posters, leaflets, flyers, worksheets, reports and a whole lot more without ever having to touch a Gastetner machine.

More importantly, as the world moves ever further into the electronic age, schools can make use of the technology at hand to produce in class projects, using the excellent software which has made Acorn the number one choice for education in Britain today. Children enjoy using the computer and are fascinated when the results of their efforts come rolling off of the printer.



Icon Technology's TechWriter is a popular document processor in the technical field

Technicalities

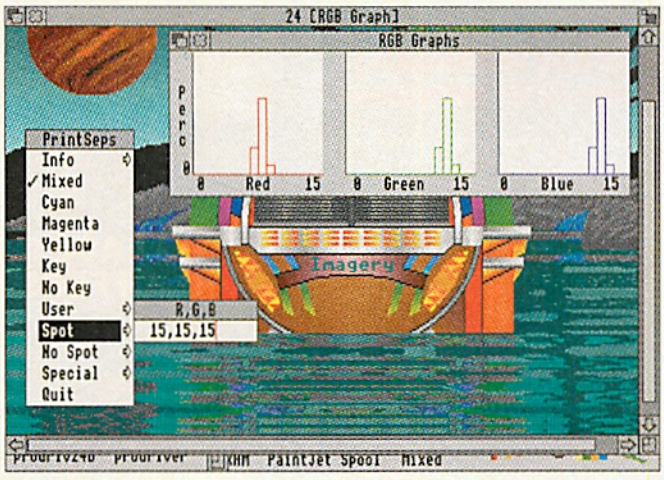
Technical drawing, too, is part of the DTP age. CAD packages fall very loosely into the DTP category, but those that fit the bill fairly and squarely are products such as TechWriter, Equasor, Impression Junior, ArtWorks, Vector, Best Form and many more. The first is an immensely powerful DTP package that has a distinct slant towards the production of technical documents, which contain mathematical equations and data. The remainder offer varying features from full page layout to drawing capabilities and equation formatting.

On the cheap

The cost of DTP software will put many people off of the idea. Although Impression is inexpensive when compared to professional packages on the Macintosh and PC, it is still in excess of £120. If you are just dabbling, you'll find that you already have many of the tools you need and those that you don't possess can be bought for very little cost.

Draw is an ideal starting place for the novice DTPer. Although it can be slow and rather cumbersome, it offers the ability to import text and sprite files which can then be manipulated and printed - remember, it is on this simple concept that DTP is based. Indeed, a book has been published on this very subject; Desktop Publishing on the Archimedes by Bruce Goatly.

Stepping up a bit, you can use the more sophisticated DrawPlus package, available from all good public domain libraries. This has more features than the standard Draw package and costs very little.



The Ace Prodriver at work

Up in the world

Moving on up, you see the price of software leap. The next best products, in terms of price, are Ovation and Impression Junior. Ovation is a fully fledged DTP package while Impression Junior is more a document processor with fewer features than it's big brother.

The next step to take is Impression II itself. This is a very fast DTP package capable of many complex things; Archimedes World was produced on Impression for the first 18 months of its existence.

Once you've got the best DTP, or perhaps the best package suited to your needs, you'll find that you will soon want supplemental packages to improve the quality of the illustrations that adorn your pages. You'll already have the basic software; Paint and Draw. These will stand you in good stead for a while but you'll soon hanker for something better. On the bitmap front, Snippet is worth having for its ease of use, relatively small memory dependency and power. It is especially useful for grabbing screens from programs (even those that run outside of the desktop), cropping, changing screen modes, etc.. On the vector graphics side, DrawPlus enters the fray again and the next logical step from this is either Vector itself (this was also written by the author of DrawPlus) or go the whole hog and plump for ArtWorks.

Both Vector and ArtWorks are very capable packages and each saves in its own format. Vector files can be read by other 4Mation packages, such as Chameleon, while ArtWorks files are compatible with Impression II for direct importation. Both packages will export as Draw files for full system compatibility. The advantage of ArtWorks is that you can also use it to import foreign graphics files from other computer platforms such as Corel Draw from the PC or Illustrator on the Mac.

The Font experience

The range of fonts available for RISC OS is increasing and we are now seeing top quality versions of fonts from other platforms being converted. Though the Acorn is supplied with a few fonts in the first place, you'll soon want to increase your range.

Fonts can be purchased from many sources and they range in price from the inexpensive public domain offerings to the top notch styles from the Electronic Font Foundry and, more recently, Look Systems.

Fonts are stored in !Fonts directories in the RISC OS environment. For the novice, this can be a bit awkward to grasp and use, so Look Systems has designed a complete font manager package to take the strain. Its ease of use makes it easy to understand for the beginner and its flexibility and power make it a desirable product for the professional as well.

Prints charming

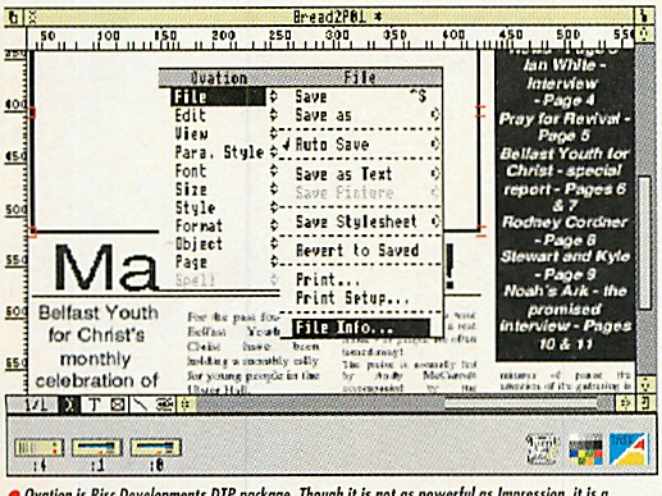
There's no point in designing a DTP page is you've no means of printing it out. The quality of print can vary a great deal, depending on the printer you are using and the driver that controls it. It is always best to use a quality printer driver that is specific to your printer.

The quality of printers also varies. At the foot of the quality ladder is the dot matrix printer followed by bubble jets and finally leading up to laser printers. As with everything else, there are many pros and cons of using each of these machines and the more money you spend, the better the quality of output.

The long and short

So, there you have it; a beginner's guide to DTP under RISC OS. Naturally, you'll want more information so, why not read the other articles in this issue and, if you've got any questions, write in to Acorn Answers and we'll do our best to answer them.

CHRIS CARLISLE



Ovation is Risc Developments DTP package. Though it is not as powerful as Impression, it is a competent package at a competitive price

FACTFILE

Product: Impression Junior
Supplier: Computer Concepts, Gaddesden Place, Hemel Hempstead, Hertfordshire, HP2 6EX. Telephone 0442 63933
Price: £89.95 (plus VAT)

Product: Impression II
Supplier: Computer Concepts
Price: £169 (plus VAT)

Product: Turbo Drivers
Supplier: Computer Concepts
Price: From £49 (plus VAT) - without printer
Additional: A number of options are available

Product: ArtWorks
Supplier: Computer Concepts
Price: £169 (plus VAT)

Product: Vector
Supplier: 4Mation, 14 Castle Park Road, Barnstaple, Devon, EX32 8PA. Telephone 0271 25353
Price: £85 (plus VAT)

Product: Snippet
Supplier: 4Mation
Price: £37.50 (plus VAT)
Additional: Includes free site license

Product: Chameleon
Supplier: 4Mation
Price: £37.50 (plus VAT)
Additional: Includes free site license

Product: TechWriter
Supplier: Icon Technology, 5 Jarrom Street, Leicester, LE2 7DH. Telephone 0533 546225
Price: £199 (plus VAT)

Product: Ace Drivers
Supplier: Ace Computing, Broadway House, 149 - 151 St Neots Road, Hardwick, Cambridge. Telephone 0954 211760.
Price: From £18.80 (plus VAT)

Product: Ovation
Supplier: Risc Developments, Hatfield Road, St Albans, Hertfordshire, AL1 4JS. Telephone 0727 860263
Price: £99 (plus VAT)
Additional: Supplied with Desktop Thesaurus

Product: ScoreDraw
Supplier: Clares, 98 Middlewich Road, Rudheath, Northwich, Cheshire, CW9 7DA. Telephone 0606 48511
Price: £61.95 (inc.)

Product: Rhapsody II
Supplier: Clares
Price: £61.95 (inc VAT)

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"Micro-Trader" really could make a difference to a business...It will make your business easier to run... Computer Shopper August '92

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*upgrade kit	£25.53
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SOFTWARE - GENERAL

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Impression Junior	£67.00
Pipedream 4	£119.00
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EasiWriter 2	£125.00
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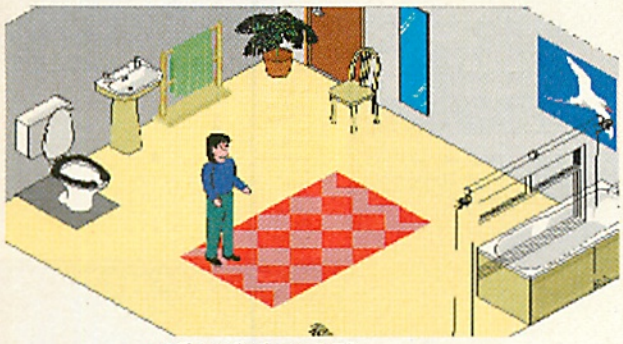


The completed room - in'3d'

A room with a view

Our man on the move plans his new home with the aid of SPEX

I must admit that I hate moving house. Not only is the process of packing and unpacking a complete pain, but there's the decision of what goes where; will it fit? Which way should it face? The list goes on. Often it's weeks before I'm finally happy. You can get programs that help you plan your garden; what would be useful is something that can do the same for your home.

SPEX from ExpLAN, is a 3D environment planning package that is designed to introduce children to the wonderful word of CAD and enable them to produce polished results with the minimum of fuss. With it you can specify a room space, add furnishings and fittings and then see how it looks in three dimensions in a matter of minutes. The application is aimed at both Primary and Secondary aged children and fits perfectly into the National Curriculum Modelling and Simulations strand of IT Capability.

The package comprises three disks, a manual, some teacher's notes and a pack of worksheets, the content of which depends on whether you've bought a Primary or Secondary site licence. The program disk contains the SPEX application, while the Items disk has all that's needed to create either a Bathroom, Lounge, Kitchen or Bedroom; further project disks are in preparation. The third disk contains a collection of Draw files of all the household objects and example pictures of completed rooms.

The application will install on to a hard disk and loads to the icon bar, provided it has first 'seen' an Environments directory. SPEX will work on a 1Mb machine, but 2Mb is preferable in that it allows you to place more objects within an environment.

Room to move

The Main Menu window has four options - Planning, Wall Fittings, Furnishing and View - and each item leads to a separate window. If you are starting a new room, you must first go to the planning department. Here, you can choose the type of room that you wish to create and stipulate its size. SPEX can work with different units of measurement including metres, centimetres, millimetres, inches and feet. The minimum and maximum dimensions are 2 and 10 metres respectively. The height is automatically set at 2.6m.

Once the initial design has been approved you can get to work on the contents. The best place to start is probably with the Wall Fittings. In this window, the four sides of the room are designated North, South, East and West and all you have to do is nominate a wall which is then displayed in two dimensions in the top half of the window. Then, it's simply a matter of choosing from a selection of doors, windows and other fittings from a scrolling box at the bottom and dragging the appropriate items into place.

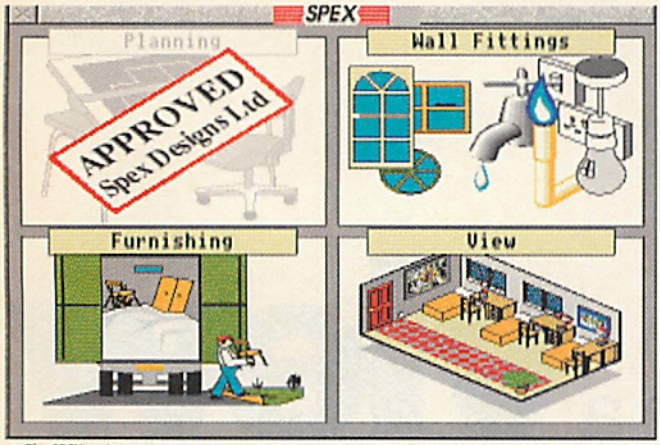
The program positions objects intelligently. This means that you can't put a plug socket a foot away from the top of the ceiling or have your windows opening at knee height. Unwanted objects can be consigned to a bin.

Clicking on Menu reveals a Draw file Save box. However, this doesn't seem to work; dragging the icon to a directory window brings up a 'Subscript out of range' error. The program doesn't crash, but it does then start to behave in a most peculiar fashion; doors can be positioned so that are nearly touching the ceiling or even off the wall completely. I assume that this is a bug that will be fixed in the near future.

The Furnishing window presents you with a plan view of the environment which can be enlarged by clicking on a magnifying glass icon. A collection of two dimensional furniture which varies according to the type of room that you are working on can be selected from a scrolling box at the bottom. You are permitted to rotate any item by clicking on it with Adjust, although this can only be done before it's dragged on to the plan. This helps to ensure that settees ➤

A finished plan, saved as a Draw file

Through the round window...



● *The SPEX main menu*

and fireplaces don't end up facing the wall. Plans can be saved as Draw files and used in other applications.

There's also an Item Search facility that enables you to include furniture from, say, the Lounge in the Bathroom. When additional SPEX Item disks have been produced, you will also be able to import objects from other environments.

At any stage you can go to the Main menu and select the View option to see how your design is taking shape. What you end up with is a three dimensional representation of your room in a scrolling window. It's not possible to alter the position of any item, although you can zoom in to a 1:6.25 magnification if you want to observe fine details. Because of the viewing angle, the East and South walls are transparent, but fittings upon these are shown in outline.

Chartered success

Each item of furniture or fittings can be issued with a cost so that the economics of the room can be equated whilst design takes place. This is a really neat idea and aids awareness of cost. By clicking on the chart button, you can produce bar graphs or pictograms to illustrate the numbers of each item used in the room. In addition, a spreadsheet option enables you to work out the cost of its contents. If you alter any of the prices, the grand total changes accordingly.

At the bottom of the window are buttons that toggle the room dimensions on and off and enable you to save your work as a SPEX file. A printer icon allows you to print out at the current paper size either the overall view, the plan, all four walls or the chart. The walls are printed with tabs so that they can be glued together into a rough model.

Pressing Menu over the view, charts or spreadsheet brings up the expected Draw file save box. However, only the 3D image is actually saved, even if the spreadsheet is on the screen at the time. Numeric values of the dimensions are also left out.

The manual is well written and is suitable for use by Junior aged children. The teacher's notes contain numerous classroom ideas and the coverage of the National Curriculum AT's is set out in minute detail.

Apart from the few problems with saving Draw files, SPEX is a superb package that has potential in several curriculum areas. It fits in perfectly with any topic on houses and home. Very few, if any, decent CAD packages are currently available for younger children. However SPEX not only produces results that would put many professional designers to shame, but also helps them to develop their understanding of the relationship between 2D and 3D objects. As a site licence is included, SPEX represents excellent value for money and should be part of every school's software library.

ALAN BENNETT ●

FACTFILE

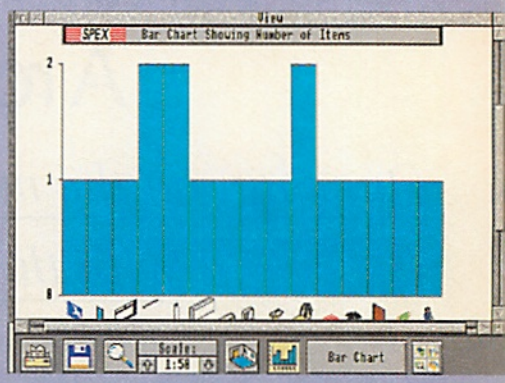
Product: SPEX
Supplier: ExpLAN UK, St Catherine's House, 20 Plymouth Road, Tavistock, Devon, PL19 8AY.
Telephone 0822 613868
Price: £59 (plus VAT) Primary site licence £99 (plus VAT) Secondary site licence

Performance: ●●●●○
Features: ●●●●○
Value: ●●●●●
Overall: ●●●●●

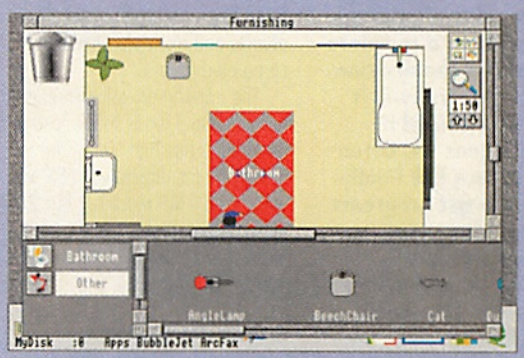
Last Words: A superb introduction to CAD

Left ● Sorting out those vital statistics

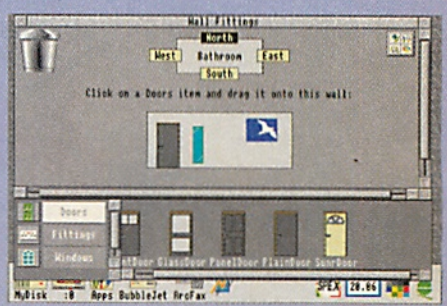
Right ● Pictograms are another way of showing what you've used



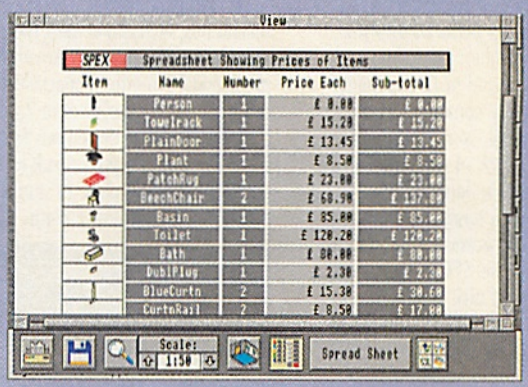
● *Room items can be represented on a bar chart*



● *The furnishings window*



● *You can stick all manner of things on your walls*



● *A spreadsheet works out the cost*

The range of TurboDrivers has expanded to include versions for the Hewlett-Packard DeskJet and LaserJet range of printers, as well as the Canon bubblejet range. The latest release 3 versions are now fully RISC OS 3.1 compliant, offer new advanced features and are faster than ever before.

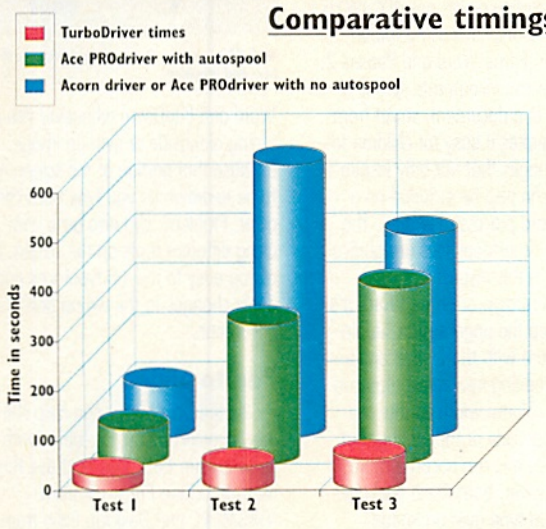
The bottom line is that if you value your time, the TurboDrivers are for you - they can render pages and give control back typically at between three and ten times faster than Acorn printer drivers or Ace PRODrivers. Indeed once the image has been rendered then the printing continues entirely in the background - as fast as the printer will go. This makes a large difference for just one page and an enormous difference if you are printing more than one copy of each page.

F E A T U R E S

- **Full 24-bit colour support for Canon BJC-800 and HP DeskJet colour printers.**
- **Three or four colour separations - even for mono printers.**
- **Extensive halftone screen control - different screen types, angles, screen density; features you would normally only find on expensive PostScript printers.**
- **Print from file entirely in the background.**
- **Fully RISC OS 3 compatible - works with !Printers and supports rotated text and sprite printing, multiple printers etc.**
- **By far the fastest printer drivers available for Acorn 32-bit computers - see chart.**

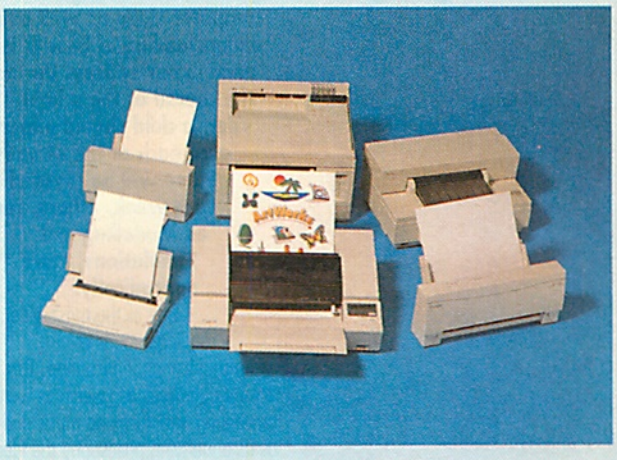
RISC OS 3 Turbo DRIVERS

Comparative timings



Test1 - A single DTP page of text and scanned graphic images
Test2 - Two copies of a three page text and graphic document
Test3 - A complex full page of graphics from ArtWorks.

The timings indicate the time in seconds to get control back. All tests performed on HP DeskJet 500 printer using a 4Mbyte A440 with an ARM3 fitted. Other machine combinations show similar performance gains.



Illustrated are a selection of printers supported by TurboDrivers. There is constant development in driver support so please contact Computer Concepts for details of latest printers.

Canon TurboDrivers £49 + VAT (£57.57 incl.)
(supports all BJ-10, BJ-200, BJ-230, BJ-300 and BJC-800 printers)

HP TurboDrivers £49 + VAT (£57.57 incl.)
(Supports all monochrome and colour DeskJet and LaserJet printers)

Please specify printer type when ordering. The BJ-230 and all HP TurboDrivers are only suitable for RISC OS 3.1 machines. 2 MBytes required.

Computer Concepts Ltd

Gaddesden Place, Hemel Hempstead, Herts HP2 6EX Telephone 0442 63933 Fax 0442 231632

Incorporating DTP in the national curriculum can confuse the uninitiated teacher. We point you in the right direction

Clip art provides quality graphics for children's DTP documents

Primary Publishing

The IT component of the National Curriculum is made up of five Strands of IT Capability - Communicating Information, Handling Information, Modelling and Simulations, Measurement and Control and Applications and Effects. These are designed to give children a range of computer skills as well as an understanding of how IT is used in our society. During the course of the school year, a child should experience each of the strands. Some will be covered each week, others, such as Modelling and Simulations, more sporadically.

One of the most wide ranging strands is Communicating Information. This focuses on areas as diverse as word processing, graphics and music and has as its underlying philosophy the idea that children should learn that their own thoughts, whether they are stories, historical research, a design or a piece of music, can be put across with the aid of a computer.

Multimedia packages are able to present information using a combination of words, pictures and sound. However, another approach that's probably less daunting to many teachers is Desktop Publishing.

A smART alien

Starting a clean page

You don't actually need specialised DTP software to do desktop publishing with kids. Any program that allows you to combine words and pictures will do, particularly for younger children. However, it's inevitable that as kids become older, their requirements will become more sophisticated. As a bare minimum for Junior or lower Secondary age children, you need software that allows you to combine text and graphics that have been created on other computers with different packages.

Good starting points are WYSIWYG word processors, such as PenDown, Start Write, Prime Word and Phases 2. All of these can incorporate sprites or Draw files in a document. smArt from 4Mation makes it easy for children to produce images that not only inspire them but can also be included on a page of word processed writing. The Aliens and Smartoons files are particularly good in this respect.

With PenDown or Prime Word, it's best to keep the page design simple - say, a picture with the writing underneath. By adding new rulers, you can adjust the column width so that the text is to one side of the writing, but after a while this can become more fiddly. However, both these packages allow you to type over an image, which can produce some interesting effects.

Start Write treats a graphic as a separate paragraph. This gets over the flickering effect which occurs in Prime Word and PenDown whenever you are typing alongside or over an image, because that portion of the screen has to be re-drawn as you type each character. Problems can also arise with using different fonts on the screen. It's all too easy to mix up typefaces and apply changes to the wrong part of the document.

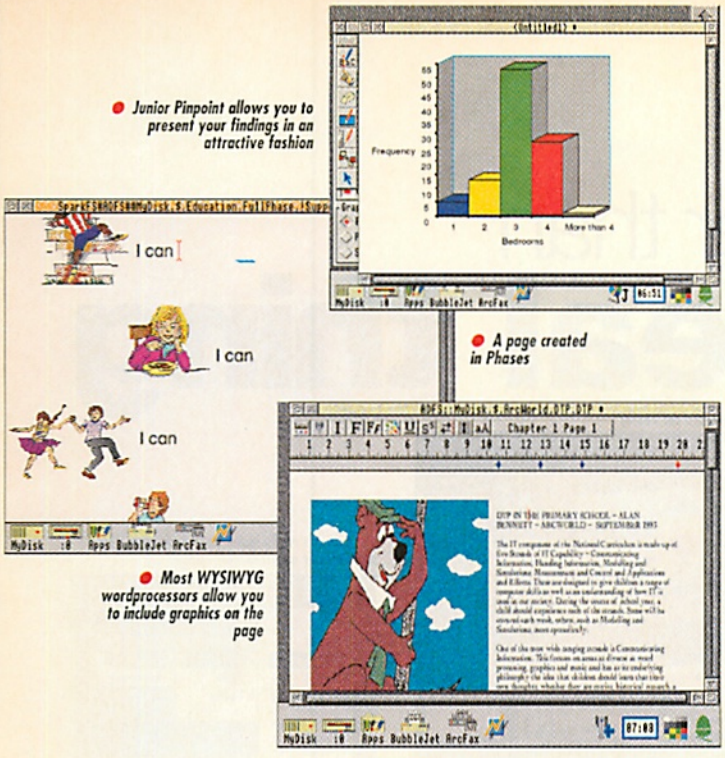
Children love using smART. It gives them something to write about too

Children can use Draw to manipulate both text and graphics

Pen to paper

Pre-defined stationery can help children overcome any difficulties with page layout. Packages that use this feature include Phases 2 from NWSMERC and Desktop Folio from ESM. Phases comes with a ready made newspaper front page, while Desktop Folio is a fully fledged DTP application and comes with a large number of designs as well as a separate range of additional packs based on specific themes, such as Christmas.

There's nothing to stop Junior aged children using Impression 2, Junior Impression or Ovation. Some aspects of page manipulation may cause some initial difficulties but these can, with practice, be overcome. What is more of a problem for those who have difficulty reading are the words used in



Junior Pinpoint allows you to present your findings in an attractive fashion

A page created in Phases

Most WYSIWYG wordprocessors allow you to include graphics on the page

the adult oriented menu structures, one reason why icon based toolboxes are so useful. Implement, the Impression toolbar application which was included on July's cover disk provides a partial solution.

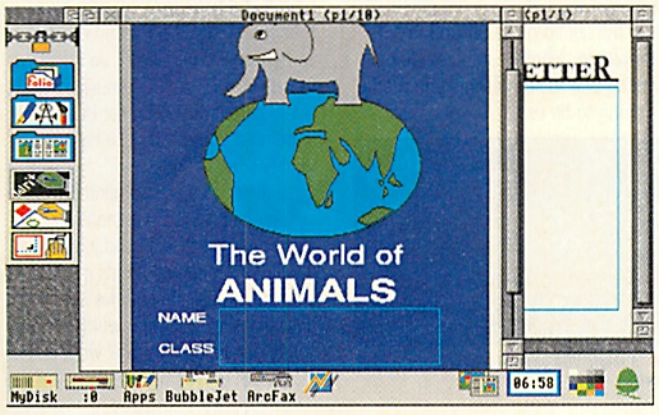
One package that shouldn't be overlooked is Draw. Anybody who has seen one of Acorn's sales demonstrations would have noticed the emphasis put on Draw's DTP capabilities. While younger children may have difficulties with the actual drawing tools, they are certainly capable of manipulating a page of text and graphics. It is useful to load a printer driver before starting and ensure that the print borders are shown on the screen. This avoids the frustration caused by finding out that the edge of your work has been missed by the printer.

Another package that I have used with children is Poster. This is much better than Draw for producing one page designs and has a better range of transformations. Another advantage is that the document view can be scaled to fit into the current window, which avoids a constant zooming back and forth. It's also easy enough for kids to use Fontasy or Font FX to create simple headlines or interesting text effects.

If you want to cover both the Communicating and Handling Information strands in one go, it's best to use Pinpoint or Junior Pinpoint. These are not only excellent for the purposes of data handling, but are also a superb way of developing DTP skills. The form designer permits you to put text anywhere on the page, as well as include suitable graphics. With the reporting facilities you can produce graphs, add labelling, other pictures and text before printing it out or saving it as a Draw file. Both applications are a 'must have' for any school.

The breakthrough point comes when children are able to independently choose and use different packages for separate parts of a DTP page. Once these skills are mastered, they can then focus on using layout to communicate their ideas more effectively. The school newspaper is just the first step - What next? Designing Arc World? Over to you editor.

ALAN BENNETT



Desktop Folio comes with a wide selection of stationary

FACTFILE

Product: Start Write
Supplier: Icon Technology, 9 Jarrom Street, Leicester, LE2 7DH. Telephone 0533 546225
Price: £72 - Single user (£60 to education)
£240 - Site license
Additional: All prices exclusive of VAT

Product: smArt
Supplier: 4Mation, 14 Castle Park Road, Whaddon Valley, Barnstaple, Devon EX32 8PA. Telephone 0201 25353
Price: £55 (plus VAT) including a site licence.
Additional: Extra smArt files from £16 + VAT.

Product: Pinpoint
Supplier: Longman Logotron
Price: £99 - single user
£260 - Primary site licence
£400 - Secondary site licence
Additional: All prices exclusive of VAT

Product: Desktop Folio
Supplier: ESM, Abbeygate House, East Road, Cambridge CB1 1DB. Telephone 0223 65445
Price: £64 - single user
£180 - Primary site licence
£295 - Secondary site licence
Additional: All prices exclusive of VAT

Product: Impression Junior
Supplier: Computer Concepts, Goddesden Place, Hemel Hempstead, Hertfordshire. Telephone 0442 63933
Price: £89 (plus VAT)

Product: Fontasy
Supplier: Ian Copestake Software, 1 Kington Road, West Kirby, Wirral, Merseyside L48 5ET. Telephone 051 625 1006
Price: £15 - single user
£45 - site licence.
Additional: All prices exclusive of VAT

Product: Junior Pinpoint
Supplier: Longman Logotron
Price: £54 - single user
£72 - Primary site licence
£120 - Secondary site licence
Additional: All prices exclusive of VAT

Product: Prime Word
Supplier: Minerva Software, Minerva House, Baring Crescent, Exeter, Devon. EX1 1TL. Telephone 0392 437756
Price: £59 - Single User
£236 - Site licence for 30 machines.
Additional: All prices exclusive of VAT

Product: Phases
Supplier: NWSMERC. Fitton Hill CDC, Rosary Road, Oldham, OL8 2QE. Telephone 061 627 4469
Price: £18 (plus VAT)
Additional: Site licences available

Product: PenDown
Supplier: Longman Logotron, 124 Cambridge Science Park, Milton Road, Cambridge. CB4 4ZS. Telephone 0223 425558
Price: £54 - single user.
£190 - Primary site licence
£330 - Secondary site licence
Additional: All prices exclusive of VAT

Product: Poster
Supplier: 4Mation,
Price: £89 (plus VAT) including free site licence

The same Alien having been posterised

Even faster than the real thing

Faster PC trades off certain features in the name of speed. We investigate this new PC Emulation package

Setting the display standard for Faster

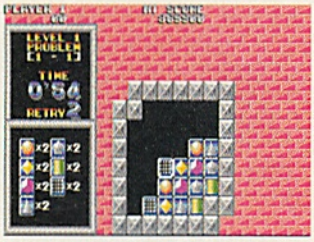
Is PC emulation the software equivalent of the search for the Holy Grail as far as the Archimedes is concerned? Or can you really tap into the massive amount of high quality software that has been produced for the IBM PC and compatibles?

Until now, you were faced with either the official Acorn software emulator or treading down the more expensive hardware path. Obviously,

EGA and slow, but playable

for anyone on a budget, there wasn't much of a choice at all. The problem was that the Acorn emulator, on an 8MHz or 12MHz ARM machine, was hopelessly slow on every screen mode except CGA. Enter FasterPC and hopefully an answer to those speed problems.

Right from the start the author, David Lawrence, in the clear and generally excellent manual, states that the purpose of his emulator is to provide speed, at the expense of certain features and screen modes.



Standard VGA and playable - one of the few that were

Getting the boot

Installation is easy enough at a basic disk level, getting more complex as you move to installing PC hard drive partitions. At the simplest level, all you have to do is backup the single emulator disk, load it to the iconbar and click on it. You're then asked to insert a DOS boot disk and away you go.

If you have a hard drive, you can configure the emulator to boot from it, obviously making life much easier, especially since you'll have access to most of the utilities in MS-DOS. If you use a boot disk, access is severely limited. However, even if you do have a hard drive it is not all plain sailing since FasterPC doesn't support either extended (XMS) or expanded (EMS) memory on the PC, which rather scuppers quite a lot of modern software.

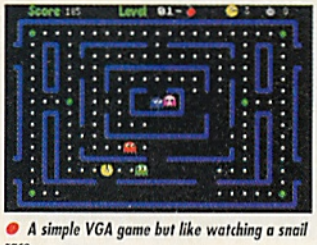
For the full list of features of FasterPC versus the Acorn emulator see Table 1.

On offer

What the FasterPC emulator effectively offers is the ability to run all CGA and VGA mode 19 software, as well as software that supports Tandy mode 9, which is effectively the same as EGA mode 13.

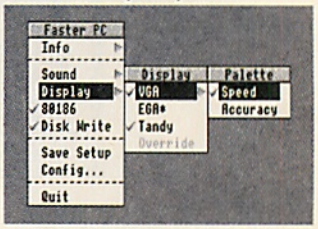
Disappointingly, the emulator doesn't support EGA except in this way. It's all the more of a shame because while the limited VGA emulation might be quicker than the Acorn one, it's still too slow to be of much use. A full EGA implementation might have been more sensible at the expense of VGA.

When you have loaded the emulator to the iconbar, there's the handy option of being able to configure just how it's going to work, so if the software bombed under one configuration, you can try another. Amongst the options is the ability to turn the sound on or off and to set its volume, whether to allow disk writing and to set which video mode is going to be used.

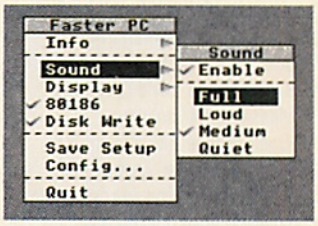


A simple VGA game but like watching a snail race

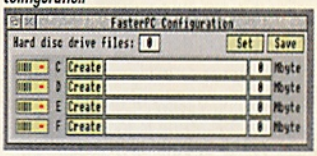
Can you really make your Archy run VGA software at an acceptable speed?



Setting the sound defaults



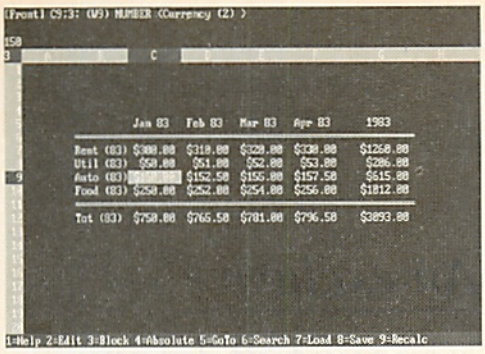
Setting FasterPC to recognise your hard disk configuration



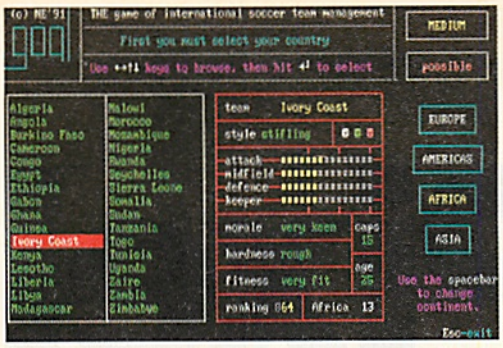
The sound implementation is a good one since, unlike the Acorn effort, it effectively implements the note based music put through it. This is at the expense of sampled sound effects however, since the system for playing sampled sound through the speaker is very processor intensive and it is unlikely that any software emulator could manage it at an acceptable speed.

You can turn the speaker off from the menu, though when installing any PC software you are also recommended to select no sound as well. To be honest, you won't be missing much since PC speaker music is generally feeble and most PC owners wanting audio effects use high quality sound cards.

The video implementation is the strange one. CGA is automatically supported, which is a good job since it's the only one which runs quickly. The only EGA mode on offer is a Tandy equivalent and software which boasts Tandy emulation may well work in this mode, but only at a slow pace. The



● *A Lotus 1-2-3 shareware clone - works fine and costs the price of a disk plus postage*



● *Successfully emulated but the speed meant each game lasted 50 minutes*

author lists a number of EGA/Tandy success stories such as Sim Life, Populous, Star Trek 25th Anniversary and Battle Chess, but it should be pointed out that none of these feature fast graphics in the first place and are all a couple of years old. Trying out recent titles - the ones that didn't require megabytes of memory and storage, like War in the Gulf, Pinball Dreams, Sensible Soccer and Zool, I found none that would run. The limit of only being able to access 720k disks on my A3000, rather than the more prevalent 1.44Mb disks, also didn't help matters.

Since one of the objectives of the emulator is to provide a faster VGA emulation, I ran the test program that is supplied. I pitted this against a 3D VGA power test on a 386SX33 by way of comparison. This is currently the entry level PC specification. I also used the CGA test so you can see how the relatively speedy CGA emulation actually compares to a real PC. See Table 2.

The results show that the emulator in CGA is approximately 10 times slower than an entry level PC, which isn't that bad considering that all these tests were performed on a standard A3000 running at 8MHz. If you're using the ARM250 chip at 12MHz, the speed improves somewhat. If you've got an ARM3 processor, you're talking about roughly the speed of a CGA mode on a real PC. Why speed? Because most CGA product was written to run on 4.77MHz and 8MHz XT PCs, not 386SXs.

Video Vigour

As I mentioned early on, where the real disappointment lies is in the VGA emulation speed. On the test supplied by the author, this is still 10 times slower than a PC (a dead crawl), and even if you use a 25MHz ARM3 machine, it's still 2.5 times slower than a 386SX, or XT/286 speed in other words. This is reasonable, but really that's with a much faster ARM processor.

It totally falls apart is when you come to using 3D manipulation of objects in VGA. The FasterPC crawls in a staggering 49 times slower and to be honest, it's like watching paint dry or grass grow.

The VGA emulation from FasterPC, far from being fast at the expense of features is pitifully slow with a standard processor, not particularly reliable since very little new software, games especially, works with it at all and other software that does is unusable because of the speed restrictions. If you go into the realms of shareware, where you can often find PC programs as good as if not better than Arc equivalents, that only cost the price of a disk, then the success rate on running VGA programs rises to about 65%, but many programs will run too slowly to be of any use. On the faster Acorn machines, it is possible to use word processors or strategy games that have little movement on screen, but that's it. Forget about PageMaker or Strike Commander, even if you had the 45Mb storage required for the latter.

Commercial concern

I'd have to say forget about commercial software, you are much better looking through the shareware libraries for products to run with an emulator. If you have an 8MHz machine, a few EGA programs, and the majority of the CGA product line are available and will work at a perfectly acceptable pace. If you have an ARM3 machine then the largely inactive VGA programs also come into line.

What's usually surprising to Arc owners is the quality of PC shareware. Most of it is fairly bad, but some is actually very good. Breeze, for example, is a DOS based word processor that offers a good many features - unfortunately it crashes while running under FasterPC. However, the point is still valid - even using a slow software emulator you still have access to a lot of high quality software for very little outlay. It just requires careful research.

There are inherent problems for any software PC emulator for the Arc. Speed, memory requirements and the inability of the standard VIDC chip to cope with the colour palette of even the lowest VGA resolution, never mind SVGA modes. Anyone who expects to get a PC on a disk is not only going to be disappointed, but is also asking for the impossible. For mid range to top end PC emulation, the only solution is hardware based. However, if you have a favourite CGA application or an ARM3 and undemanding EGA/VGA application, you'll now find that, with some notable restrictions, you can run them faster than ever before.

MARK ULYATT ●

FACTFILE

Product: FasterPC
Supplier: D.Lawrence, 33 High Street, Farnborough, Hampshire, GU14 6ES.
Price: £20.00

Performance: ●●●○○
Features: ●●○○○
Value: ●●●●●
Overall: ●●●○○

WINDOWS?

The recommended minimum computer configuration for running Microsoft Windows is a 386SX processor and hard drive, preferably with a VGA monitor. Windows is a slow creature on the fastest machines and needs to be beefed up with accelerator cards and extra memory. Considering that FasterPC is hard pushed to match the speed of a reasonable PC, Windows is not a viable option.

TABLE 1 - FEATURES

Feature	FasterPC	Acorn PCem
Video Modes	CGA, Tandy (m9 equivalent of EGA 13),VGA (m19 only)	CGA, EGA, VGA
Relative video speed	Faster	Slower
Sound	Full note based speaker	Partial note based speaker
Memory	640k	640k, extended and expanded
Processor	8086/8, 8186	8086/8
Multitask	No	Yes
Co-processor emulation	No	Yes
HD disk support	No	?
On-line configuration	Yes	No
Extras	Test programs mouse driver (very small) escape driver	MS-Dos 3.3

TABLE 2 - VIDEO POWER

Test	FasterPC	386SX
CGA full screen vertical scroll	27.5s	2.7s
VGA full screen horizontal scroll	2m 24s	19s
VGA 3-D object manipulation (frames/second)	0.2f/s	9.8f/s

Pixel ACCOUNTING

An exclusive account of Irlam Instrument's new bitmap storage utility, ImageBank

The left image is the original. The right image has been recovered after JPEG lossy compression to 17% of its original size. Reduction in quality is minimal

Are you fed up with searching through your hard disk for an image you saved last week, only to discover it in the most unlikely of places? A new utility from Irlam Instruments could be your saviour.

ImageBank is a new, inexpensive and easy-to-use application utility designed to store any number of highly compressed images. It then displays all of them on screen as thumbnails so that they can be instantly recognised and recalled. Each image is displayed together with information about it to aid your cataloguing.

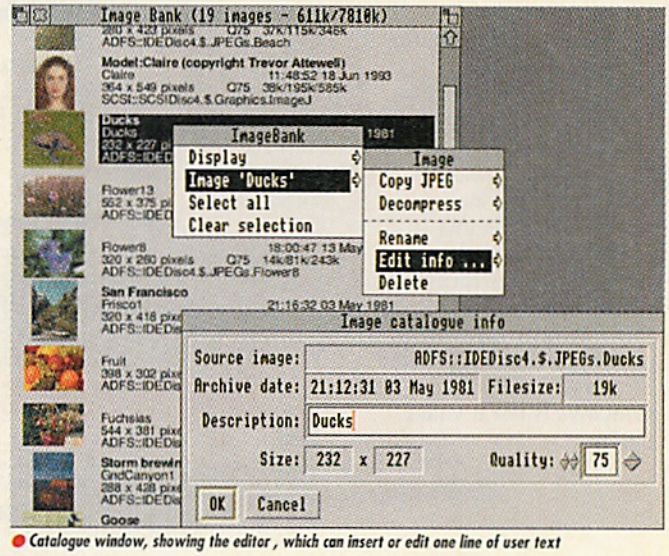
The application requires RISC OS3.10 or later to run and will function on an unexpanded 1Mb machine, although 2Mb is a more practical minimum and 4Mb can be needed when dealing with large-ish Sprite files, as discussed below. Using ImageBank, it is possible to get nearly 8Mb of images on to a single 800Kb floppy, including the application itself.

Got it Jpegged

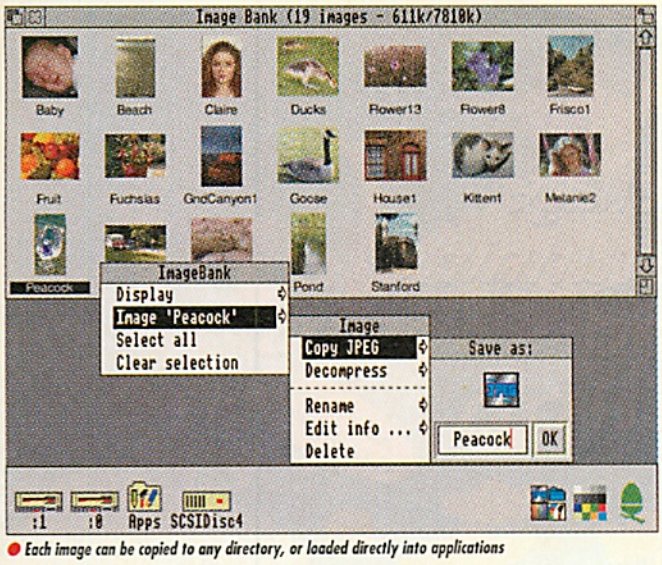
ImageBank was designed for users of the JPEG image compression system. JPEG files can be produced directly by some applications, particularly Irlam scanners or by conversion from other formats, including Sprites. Applications such as ChangeFSI, AltrImage and JPEG are available to do this. Many potential users of ImageBank will have the majority of their images in Sprite format, so ChangeFSI is supplied free, under license from Acorn, to allow these to be compressed in JPEG format. This requires three command line instructions, currently not listed in the package, but provided here. However, ImageBank will be modified in due course to accept Sprite files directly.

When ImageBank is run, a 'browser' window appears, in which all images currently in the archive are shown as thumbnails, with their filenames. To add a new Sprite, its JPEG form is simply dropped into the viewing window or onto the icon and any existing image can be deleted or renamed. By default, the small images appear seven to a row, with their filenames and a window menu allows them to be sorted by name, by size or by date.

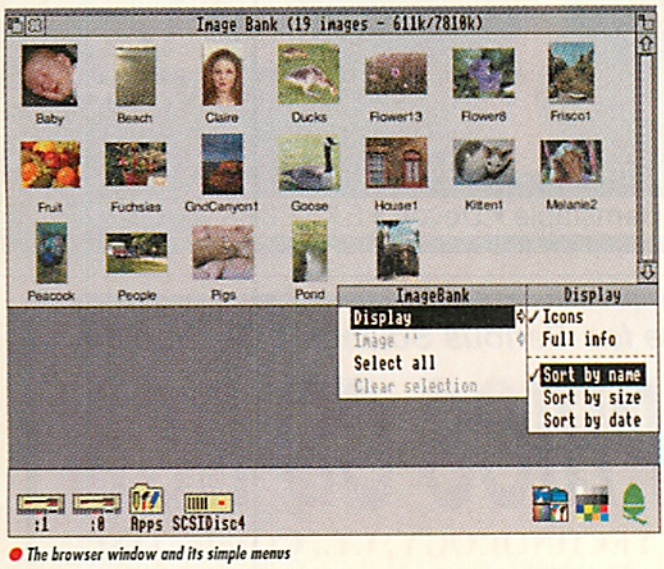
Choosing 'Full info' changes the display to a catalogue, in which the images appear vertically in sequence, together with relevant information about each. This includes the filename, the date stamp, the size in pixels, the JPEG 'quality' (determined by the extent to which the image has been compressed), the file sizes at each stage of the operation and the full pathname for the file. Users can add a line of supplementary information of their own, up to about 50 characters maximum.



Catalogue window, showing the editor, which can insert or edit one line of user text



Each image can be copied to any directory, or loaded directly into applications



The browser window and its simple menus

The window header gives the total number of bytes used by all images, original and compressed.

By editing a text file, it is possible to change the size of the displayed images, within a restricted range and also to change the text style (the choice is Homerton or System font) and the date format, but most users will probably settle for the defaults.

Image recovery

Any image file can be copied unchanged to any other directory by dragging the icon produced when it is selected. Alternatively it can be decompressed directly into any application that supports Sprites, in any of four formats. The standard format is a mode 21 Sprite with the normal 256-colour palette, which can be viewed in any 256-colour screen mode. Grey gives a 256 grey scale in mode 21. You should note that this will not actually appear in 256 shades of grey in the desktop as the standard Archimedes cannot display 256 shades of grey. Its main purpose is so that you get better detail on a monochrome printer. The Optimised option uses the most common colours in the image to define a palette which will show the Sprite to best effect, but this option does require a colour card. Finally, the Clear option produces a 24-bit Clear file for interchange with 24-bit colour applications.

Decompressing a JPEG file involves a lot of complex processing and therefore takes some time, typically about 15 seconds for a 200Kb original. However, the big advantages of JPEG are that the compression ratio is variable and that even a highly compressed image will decompress to a quality very close to that of the original. This results in a large saving in disk space with negligible loss of image quality.

CONVERTING SPRITES TO JPEG WITH CHANGEFSI

To convert Sprites to JPEG files, you will need the files "ChangeFSI" and "cjpeg" from within the !ChangeFSI directory. Choose (or set up) a suitable directory, then drag these files and your Sprite file into it, and use *dir <pathname> to make it the currently selected directory. Using the task window (CTRL-f12), type at the '*' prompt:

```
ChangeFSI  <spritefile>  pfile  p6
```

where "spritefile" is the name of the Sprite file, and "pfile" is a necessary intermediate output file. After a delay while this file is created, type:

```
cjpeg  -Q75  pfile  jfile
```

This will create the required "jfile", but it will be a DATA file. To make it understandable by ImageBank, type:

```
settype  jfile  JPEG
```

This file can now be dragged into the ImageBank window.
The value of Q sets the image quality, range 0-100 (75 typically compresses to about a sixth of the original size, but you can experiment with other values - 0 is worst quality)

For extra processing speed you can use a RAMdisk. The intermediate "pfile" is about three times the size of the original file, and both programs need workspace, so think big when setting up the RAMFS size!

There is no manual at present, but there is a useful Readme file on the disk and interactive Help is also implemented. Few users are likely to need even these basic aids, since the menus, plus a couple of minutes of experiment, reveal all.

ImageBank is available in two versions. One is as described above, including a number of sample images and is fully supported, with free upgrades if necessary. The other is a free, cut down version, with the same images. This can be distributed freely under the stated conditions and the images may be used for personal purposes, but may not be removed, altered or published. The cut-down version is not in the Public Domain and may not be supported. This demo version will not allow additional images to be added to it and it is only possible to save Sprites from it, no Clear file support is included.

Summary and conclusions

There are other utilities, some in the PD, that serve as databases for images, including one or two that display small images, but those I have seen do not contain the images in usable form and merely remind the user where to find the original. The beauty of ImageBank is that the user can store a large number of images in far less space than conventional compression would allow, with negligible loss in quality. Each image is accompanied by full background information and can be recovered directly into other applications. But, why take my word for it when you can try it out for yourself with the demo version on this month's cover disk?

ImageBank is another of those good ideas that makes one wonder why nobody thought of it before. It's nicely implemented, easy to use, so useful and inexpensive that it seems likely to sell in large numbers.

TREVOR ATTEWELL

FACTFILE

Product: ImageBank
Supplier: Irlam Instruments Ltd, Brunel Institute for Bioengineering, Brunel University, Uxbridge, Middx. UB8 3PH.
Telephone 0895 811401
Price: £15 (plus VAT)

Performance: ●●●●●
Features: ●●●○○
Value: ●●●●●
Overall: ●●●●○

Last Words: ImageBank will be even better when it has been modified to accept Sprites directly. Upgrades will be free.

Yes, it really was ten years ago that the original version was published!

Granny's Garden

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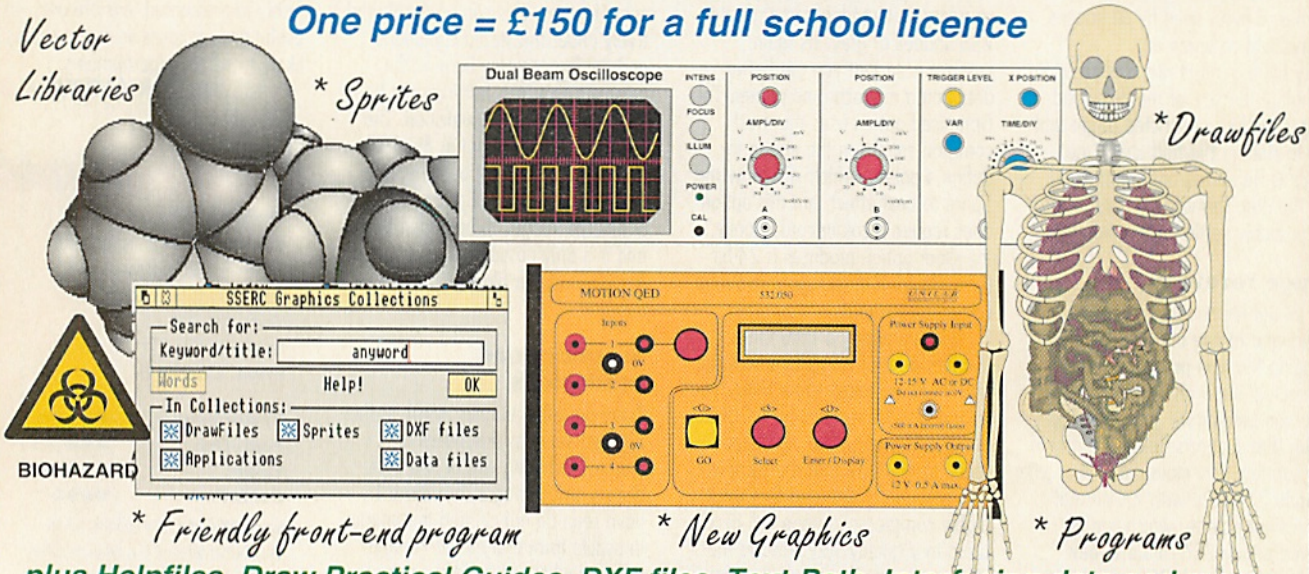

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Reviews

EDUCATION

Darryl The Dragon

Supplier: 4Mation, 14 Castle Park Road, Whaddon Valley, Barnstaple, Devon EX32 8PA
Telephone 0271 25353
Price: £19.50 (plus VAT) - single user. £39.00 (Plus VAT) - site licence

Performance: ●●●●●
Features: ●●●●○
Value: ●●●●●
Overall: ●●●●●

Last Words: Another fun adventure from 4Mation.

Darryl the Dragon, from 4Mation, is a problem solving adventure for junior aged children. It behaves in a similar fashion to the recent RISC OS conversion of Granny's Garden, although the graphics and animations aren't as complex as those produced for the latter by Don Slaven.

The package consists of two disks and a manual. As is the case with all new 4Mation software, disk one has to be initialised and then used as a key. A site licence version is available at extra cost.

Hot stuff

The manual contains an eight page story written by Mike Matson that serves as an introduction to the adventure. The plot centres around a certain dragon called Darryl, who's had the misfortune to lose his fiery breath as a result of catching a cold. In order to resolve this damp dilemma, there are two tasks to complete. First of all you must find some honey to soothe his throat, as well as some matches to ignite his pilot light. Then you must go to the nasty wizard's castle and recover Darryl's fireproof handkerchief.

The application loads to the icon bar and runs in its own window, although a main menu option allows you to use the full screen if you so wish. Other menu items let you control the volume with a slider and close the window. If you run the program on a floppy only machine, a few disk swaps are needed, but these don't present much of a problem.

The Icon Bar menu enables you to save your current position, which means that you can have several groups of kids on the go at once. There's also a Preferences dialogue box with which you can set the difficulty level at either Easy, Medium or (wait for it), Hard and choose which outline font is used for the text.

Before each task, there are a couple of introductory screens that explain what needs to be done. After this, the action in Part One centres around a map showing various locations that you can visit with just one click of a mouse button. Although you can only go to six places, you are kept busy by some pretty fiendish puzzles.

Part two takes place inside the wizard's castle where there are plenty of interesting characters to meet as you traverse the game. Some of these are very helpful, others, such as Tracey the ferry woman, are the cause of great frustration.

Sampled sound effects are used throughout. These include birdsong in the forest as well as something that sounds more like World War 3 but is fact supposed to represent an altercation between a chicken, a dog and a fox.

And finally...

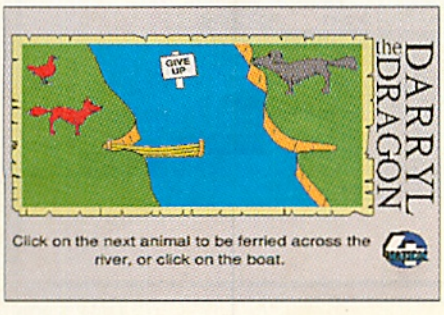
The solution isn't as straightforward as it first seems. To reach the end of the quest involves a lot of legwork as well as the patience of a Pascal programmer.

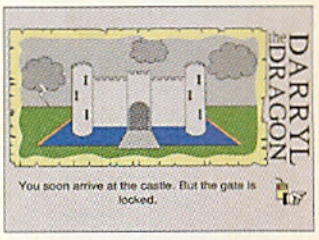
The manual is excellent and contains a lot of imaginative classroom ideas. A set of 32 photocopiable activity sheets is available separately. These are full of humour and are beautifully designed. They include various maps and games and the 'Essential Guard Dog Pacifying Bone Chart' - very Mike Matson.

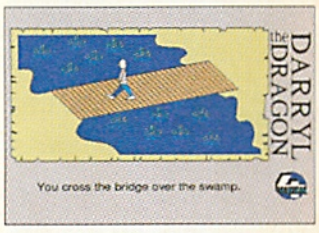
My kids found Darryl quite enthralling. They were always trying to catch a glimpse of what other groups were doing. Passwords were something of a valuable commodity in the playground.

Dragons have been the basis of successful topics in Primary schools throughout the land. Any teacher about to embark on a similar venture should make a point of becoming acquainted with Darryl.

ALAN BENNETT







WHAT THE KIDS SAY....

COMMENTS FROM CLASS 6 AT COMBE DOWN PRIMARY SCHOOL, BATH.

Jane - Age 9
Darryl the Dragon is a great game. It is about a dragon called Darryl that has lost his fiery breath and needs you to find some honey to soothe his throat. You are faced with some nearly impossible tasks, like getting three animals across a river without two fighting, or making the bees not sting you. I like it because it is something that you can puzzle over. I think it is really brilliant!

Gregory - Age 9
Darryl the Dragon is ill and you have to help him and you have to get some honey and matches. You have to go to a castle and get Darryl's handkerchief and it will say The End. Darryl's handkerchief is heavy and the shop will get you some matches. It is good because it is exciting.

Gemma - Age 8
Darryl the Dragon is fun to use. At first we were a bit confused and then we realised what to do. It gets a bit frustrating at times. The first bit of it is quite boring, but when you get to the wizard's castle it's a bit better. It's very annoying having to go into the moat every time something goes wrong. It is not a game I would buy personally. I did enjoy it a lot, but not as much as ArcVenture Romans. It is a little bit better than Badger Trails.

Edmund - Age 9
Darryl the Dragon is a computer program we are using in our class. You own a shop and you are living in some type of fairy tale land. You have to help Darryl because he has a cold and his fire has gone out. You have go to get him the following things: honey, for his cold, matches, to light his fire and his fireproof handkerchief. I like Darryl because of the tasks you have to do on the way to fetching each thing. You have a map on the screen and you click where you want to go. The honey and matches are quite easy to find. The handkerchief isn't! I think Darryl the Dragon is GREAT!

EDUCATION

Imagine

Product: Imagine Version 1
Price: £35 (plus VAT)
Supplier: Topologika, PO Box 39, Skilton, Peterborough, Cambridgeshire, PE7 3RL. Telephone 0733 244682

Performance: ●●●●●
Features: ●●●○○
Value: ●●●●○
Overall: ●●●●○
Last Words: Excellent starter for primary computer art with cross curricular capabilities

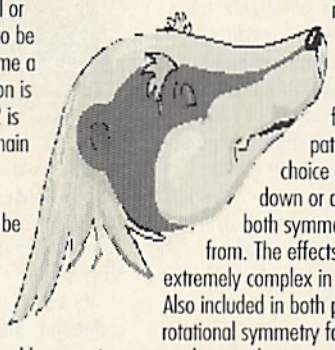
Product: Imagine Version 2
Price: £45 plus VAT (includes copy of Version 1)
Supplier: Topologika

Performance: ●●●●●
Features: ●●●●○
Value: ●●●●●
Overall: ●●●●●
Last Words: Even better; David Hockney watch out!

Imagine is a versatile primary art pack, a step up from it's sister application, Tiny Draw, with uses right across the curriculum. It is one of the easiest packages I have used and, being designed for children, one would expect that. However the results obtained, even without the fancy tools that one finds in more expensive packages, can be quite sophisticated. With its mathematical function tools of symmetry, tessellations, spiral and elementary turtle-logo it should fit well into the primary classroom.

Due to the limitations of memory in the early versions of the Archimedes, Version 1 of Imagine does not multi-task. However, a new multitasking version has now been released. This works in two 256-colour modes, 15 and 28, but a word of warning for those with a 1Mb machine - operating in Mode 15 will require 800K of memory, not to mention 160K for the screen memory itself, while using Imagine in mode 28 will take up 1400K. The upgraded Imagine will therefore not work on a 1Mb machine. Files are compatible with the previous version and can be transferred between each without difficulty.

There is little need for a user manual with either version of Imagine, as descriptions of all functions are available with a comprehensive on-line help system. Nevertheless, a handbook is provided for those who, like myself, like to browse. Help in Version 1 may be configured off, to appear each time a menu, tool or function is selected or to be present only the first time a particular tool or function is used. Help in Version 2 is accessed through the main menu.



Both versions of Imagine allow work to be carried out on two screens at the same time, with copying between the two screens possible. This enables experimentation to be carried out on one screen, while the other is where the completed picture is assembled, the results of experimentation being copied across. Version 1 is not multi-tasking and therefore takes over the whole screen in use. Version 2 has the option of RISC OS windows or full screen displays for those who prefer using a full screen.

Take your choice

A configure or Preference facility, supplied as a separate application with Version 1, or accessed via the main icon menu of the multi-tasking version, permits the majority of options to be switched on or off. Only the palette, pick from screen, wipe canvas and shapes are non-switchable. Even the mouse can be configured for left or right handed users with this option. The number of colours available can be set to 16, 64 or 256. The colour selector box remains the same size but the palette squares reduce in size the greater the number of colours available. The younger child or those with a co-ordination problem will find the 16 colour palette much easier to use with its large coloured squares.

Symmetries are fascinating to use. When drawing with the symmetry tool, lines mirroring the action of the mouse appear on the screen in addition to those which follow the mouse path. There is a choice of left-right, up-down or a combination of both symmetries to choose from. The effects can be extremely complex in appearance. Also included in both packages is a rotational symmetry facility which produces rather extravagant designs from a few simple strokes of the brush. The effect can be very like the patterns produced for ornamental bosses or ceiling roses.

Kaleidoscope is new to Version 2 and, as the name implies, will produce patterns similar to those viewed in a real kaleidoscope. The tool takes a sector of the screen and repeats the image, either in copy or reflection mode, to complete a circular pattern. Impressive images are obtained from just a few coloured daubs. The almost instant success in producing a masterpiece should encourage children to experiment further.

Tessellations of triangles, squares, hexagons or quadrilaterals can be accomplished easily with the facility provided. Circles, while not truly tessellating, are included, as the blurb says, "just for fun". The tessellations are laid over the whole of the screen area after first establishing the size of the geometric figure to be tessellated. By using the 'jug' tool, the patterns can be filled with colour.

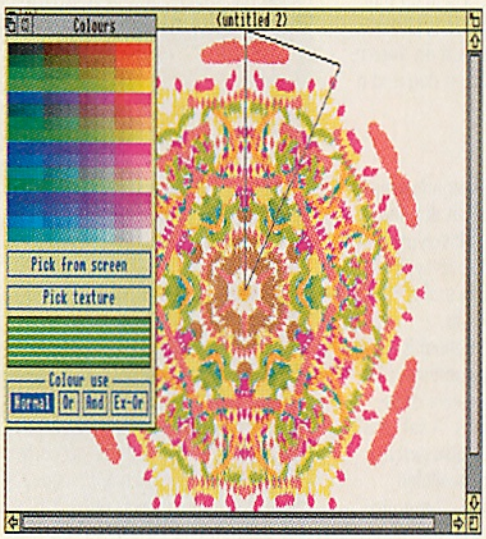
Impressive line or filled spirals are easy with the tool provided in both versions of Imagine. First, the central starting point is selected, line width is set and finally the overall diameter of the spiral is determined. A click on select causes a perfect spiral to be drawn.

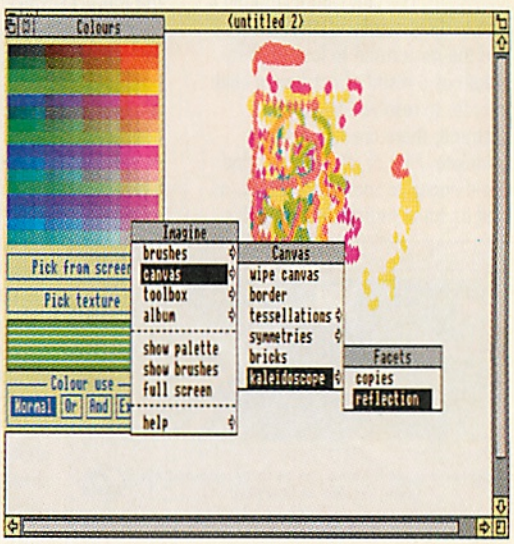
Writ large

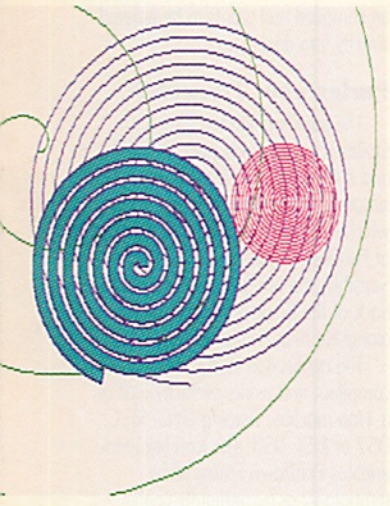
Text in the original Imagine is restricted to system font. The multi-tasking version allows use of all outline fonts that are installed on the computer. Text can be placed anywhere on the current page either as preset size or 'stretched' to fit.

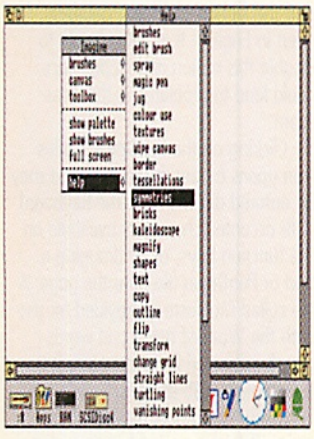
A feature which could prove very useful is Outline. With this, a coloured shape on the screen can be outlined with the current colour. Simply click Select on the shape to be outlined and it is done. Drawing lines using Logo-like instructions is catered for. There is a choice between firm, dashed, or dotted lines, or a brush. Units of movement across the screen are points. Direction is set in degrees, a left turn uses positive values, right negative values.

Perspective is a feature which will prove very useful for perspective drawing. Two moveable points, symmetric left-right about the screen centre, serve as vanishing points for art work. One of the two points can be set by the mouse with the other point mirroring the action. To call up the perspective lines, one merely has to press V. If the screen is drawn on while the perspective lines are present, these are 'grabbed' as part of the picture, so unless they are to be incorporated as a feature, remove the perspective lines before carrying on with the drawing.









A gallery application that is supplied as part of the package acts as a carousel viewer, allowing directories to Imagine or Sprite files to be displayed successively. To make use of the gallery function, all sprites must be stored in the screen mode that Imagine is running in. This can be useful for animating images that contain subtle differences.

This is a fun application with cross-curricular usage which I enjoyed very much. There are limitations to it's capabilities, but these are outweighed by the use to which the complete package can be put. I would like to have seen an on screen toolbox, but appreciate that this is an educational tool and not just an art package. It is possible that the Toolbox may have been deliberately omitted to encourage reading skills to be used. Of the two version, I much preferred Version 2, mainly because of the multi-tasking capabilities. Version one is offered as a single application for all those with only 1Mb machines, however the pack containing Version 2 includes Version 1!

DON SLAVEN

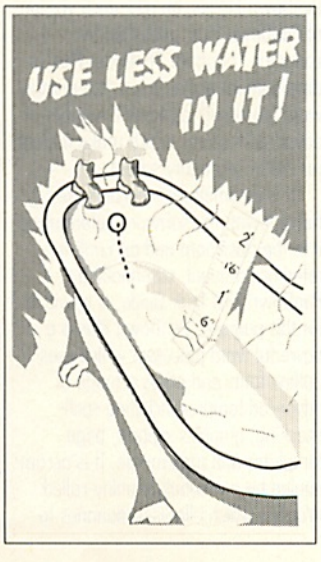
EDUCATION

Desktop Folio Theme Packs

Product: Space, Maths, Editor, World War Two.
Price: £22.50 (plus VAT) - Site licence included
Supplier: ESM, Abbeygate House, East Road, Cambridge, CB1 1DB
Telephone 0223 65445
Additional: Festive folio also available at £17.50 (plus VAT)

Performance: ●●●●●
Features: ●●●●●
Value: ●●●●●
Overall: ●●●●●

Last Words: Indispensable for DT Folio users.



One of the advantages of Desktop Folio, the acclaimed DTP software for schools, is that it can use pre-designed stationery. This has been exploited by ESM in its release of several new theme packs aimed at both Primary and Secondary schools; World War 2, Editor, Maths and Space. These not only provide teachers with a set of curriculum ideas and activities, but also a collection of mostly Draw file clip art relevant to each topic.

Each pack consists of a Work disk, a Library disk and an A5 size ring binder manual. The work disks contain a couple of extra Outline fonts, a Public directory of stationery and its associated resources together with a User directory for your own work. The Library disk contains several directories of additional graphics.

Ready made documents

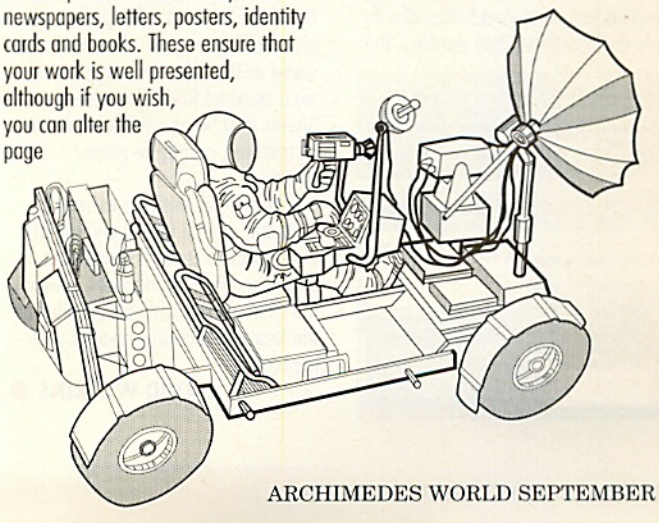
The stationery provided in the various packs includes ready made newspapers, letters, posters, identity cards and books. These ensure that your work is well presented, although if you wish, you can alter the page design or design your own documents from scratch.

The clip art files are a veritable treasure trove that can not only be used in folio documents, but also in other worksheets and posters. Some excellent images are included - the spacecraft in the Space pack are particularly good, as are the reproductions of propaganda posters that come with World War 2. Included in the maths library are a set of weather symbols, as well as enough coins, clocks, tangrams and calculator buttons to brighten up the dullest maths work sheet.

The manuals include clear instructions for making new Work disks as well as a number of further ideas that are illustrated by children's work. Picture Library cards show you miniature versions of all the clip art listed by directory.

First class

These packs are an obvious choice for the many schools that use Desktop Folio. However, if you don't have the application, they are still worth buying for the clip art, simply because in many cases similar images are not available from any other source.



EDUCATION

KeyCount

Supplier: SCA (Anglia Television) PO Box 18, Benfleet, Essex SS7 1AZ. Tel. 0268 755811
Price: £32.50 (Individual copy)
Site Licences: Cost for Primary schools £40 - £50, for Secondary schools £100 - £120 depending on size, and for Middle schools £60.

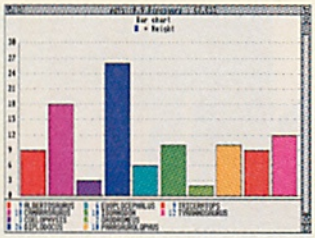
Performance: ●●●●●
Features: ●●●●●
Value: ●●●●●
Overall: ●●●●●

Last Words: A valuable introduction for primary school children to spreadsheets and a good foundation for the use of KeyCalc in secondary school

KeyCount is a spreadsheet application that has been designed specifically for use in primary education with children aged from 7 to 11 years. It also offers a wide range of mathematical, logical and statistical functions and promises to be useful at the lower end of secondary schools as well.

KeyCount is fully RISC OS compliant and, once loaded on the icon bar, it may be configured for the intended age and ability range. The Configuration option can be password-protected for security. The spreadsheet can be configured from 10 columns by 10 rows to 99 columns by 99 rows, the grid display may be switched on or off, the number of decimal places defined and the printer output controlled. The Macro window which lists the available macros and functions, may also be displayed.

KeyCount is directly compatible with KeyCalc, the secondary school spreadsheet package and all of the KeyCalc functions are available to KeyCount. It is also possible to load KeyPlus and KeyNote datafiles directly into KeyCount, including graphics. The



cells of KeyCount can hold Drawfiles or sprites as well as labels, data and formulae. The pictures can stimulate interest or explain the data, and make this application very suitable for the intended audience.

There are 14 icons across the top of the sheet which are used to control layout, data entry, data display, replication, block deletion and output as graphs, printout or disk file. A single line of text appears below the icons to explain the particular icon that the pointer is over.

The application handles typed input intelligently, deciding whether it is data, text or a formula and displays it in appropriate shades of grey. Cells are automatically sized so that the column is wide enough to hold the largest entry in that column.

The hard cell

Most operations controlled by the icons act on an area of selected cells. Selection is a simple matter of dragging the pointer across the chosen cells with the Select button held down. Entries in a selected area can be ranged left, right or centre, localised decimal display can be defined, or cells can be filled with the suitably modified contents of a chosen cell. There is even an icon to sum the selected area, placing the appropriate formula in the chosen cell.

Cells can hold macros as well as formulae. Macros are user-defined formulae which can take parameters and are written in a text editor, such as Edit, to be imported into KeyCount and enable teachers to provide pupils with standard functions.

Five types of graph are available - Bar chart, Pie chart, Line graph, Line plot and Scatter graph. Graphs can be saved as Drawfiles or printed directly via a standard RISC OS printer driver. Sheets may be saved as KeyCalc files, as text files, or may be printed directly.

The documentation is extremely clear and easy to follow, and contains photocopiable Teacher Information sheets and Pupil Worksheets, covering the example spreadsheets provided on the Resource disk accompanying the application.

DAVID WATKINS

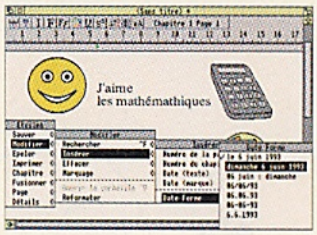
EDUCATION

PenDown Etoiles

Supplier: BBC Educational Publishing, PO Box 234, Wetherby, West Yorkshire LS23 7EU
Price: £63.45 (inc. VAT)
Additional: A Site Licence costs £300.00, but existing PenDown Site Licensees can upgrade for £63.45.

Performance: ●●●●●
Features: ●●●●●
Value: ●●●●●
Overall: ●●●●●

Last Words: A must for all French departments. Highly recommended.



Etoiles is a five-year, multi-media French course developed jointly by the BBC and Longman. It consists of television series, radio series, a wide range of books for teachers and students, video and audio cassettes, and software. The course is aimed specifically at Key Stages 3 and 4 of the National Curriculum and is therefore of most use to teachers in England and Wales.

The software component of this impressive multi-media resource is PenDown Etoiles, an all-French version of PenDown Plus, published by Longman Logotron. PenDown Plus (a development of PenDown, the primary word processor) contains a number of advanced features which make it ideal for use in secondary schools.

It is essential that teachers are familiar with the software before using it in the classroom and an English reference manual, essentially a PenDown Plus User Guide, is provided for this purpose. PenDown Plus is a powerful word processor which uses outline fonts and offers a range of advanced features including spell-checking, graphics support, page templates and mail merge. It is accompanied by a vocabulary utility called Wordlist which allows dictionaries to be compiled and words to be entered directly into documents.

Parles vous Francais?

The pupil's guide to PenDown Etoiles is called Guide pour les ÈlÈves and is all in French! It provides a simple introduction and a few activities which form a basic tutorial in the use of PenDown Etoiles and Wordlist. Sensibly, the reference section at the back of the Guide shows all the menus alongside their English equivalents.

The application is RISC OS compliant and works perfectly well on a 1Mb machine running either RISC OS2 or RISC OS3. The icon bar menu enables PenDown Etoiles to be temporarily or permanently configured, and this option can seem daunting, even in English. It is not possible to disable this option and its presence could lead to problems in the classroom.

Clicking on the PenDown Etoiles icon opens a new document. Text may be entered directly from the keyboard, with accented characters available on the function keys, or by dragging a text or PenDown file onto the page. A file called MotJuste is provided for use with the Wordlist utility and words may be selected for direct entry from it, complete with accents.

A strip of icons at the top of the page offers a range of functions. From left to right they are: New Ruler; Graphics/Write; Insert/Overwrite; Select Font; Change Font; Text Colour; Underlining; Subscripts/Superscripts; Text Justification; Leading; and Case Change.

All other functions are available from the main menu and are arranged logically in a series of submenus. The Spell Check option is supported by a 72,000 word French dictionary through which the user may browse in search of the right word. The Wordlist utility may be used to create custom-made dictionaries for specific lessons.

Of Course

Although PenDown Etoiles has been specifically designed to support the five-year Etoiles French course produced jointly by the BBC and Longman, it will be of considerable use with any French course.

DAVID WATKINS

EDUCATION

KeyPlus

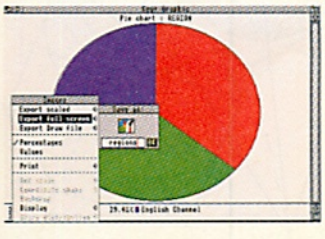
Supplier: SCA (Anglia Television) PO Box 18, Benfleet, Essex SS7 1AZ Tel. 0268 755811
Price: £60 (individual copy)
£65 Primary site licences
£140 - £180 Secondary license (depending on size)
£110 - Middle schools

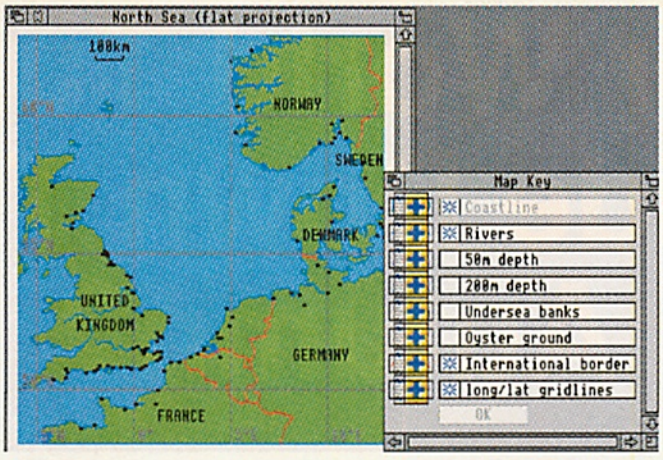
Performance: ●●●●●
Features: ●●●●●
Value: ●●●●●
Overall: ●●●●●

Last Words: KeyPlus is also available for IBM and compatible computers. It promises to become the standard RDBMS in schools.

Starting life as Key on the BBC micro and RM Nimbus, KeyPlus has developed from a data handling system to a relational database management system (RDBMS). An RDBMS is a database system based on the relational model where it is possible to manipulate data, by using mathematical functions such as AND, OR and NOT, and form links with records in other datafiles. The relational model is highly flexible and provides a powerful tool for users wishing to retrieve and analyse data.

KeyPlus is the heart of the Key suite of applications from Anglia Television Limited and is supported by a wide range of cross-curriculum datafiles for use in History, Geography, Science and Natural History. It offers great potential in the teaching of modern foreign languages as it can be configured to operate in English, French, German, Spanish or Welsh. In addition, KeyPlus offers control facilities for LaserVision disks and KeyPlus datafiles are becoming increasingly available on CD-ROM. There have been regular upgrades to KeyPlus and users have been provided with disks and supplementary documentation. This year marks the release of version 3.0 and a new manual has been produced to accompany this release.





Data engineering

KeyPlus is an 'engine' which allows users to investigate a datafile. It is not used to edit existing datafiles nor create new ones, these functions are carried out by KeyEdit. This separation of file interrogation from file editing has immense value for the classroom and protects data from accidental or deliberate modification. Since release 2.50, datafiles have been saved as applications, rather than directories and now KeyPlus is loaded and run when a datafile application is double-clicked. The older datafile directories are automatically converted to datafile applications when loaded into KeyEdit and sub-files, exported by KeyPlus, are also saved as applications. KeyPlus also allows data to be exported from datafiles as ASCII (plain text), SID (Software Independent Data) and as CSV (Comma Separated Values), for editing and for use in non-Key applications such as spreadsheets and desktop publishing. KeyPlus datafiles are directly compatible with other Key programs such as KeyCalc.

When a KeyPlus datafile is loaded, a datafile information window opens to show the number of records, fields, current record order and when the file was last amended. This window must always be present while a datafile is open for interrogation and closing it will close the datafile.

KeyPlus supports a wide range of field types that can be grouped into three main sets - text, pre-defined and numeric. Text fields can contain fixed strings or free text, formatted in paragraphs and ranged left, right or centred. Pre-defined fields can be token or nominal fields and can hold up to 32 categories or fixed choices. Token fields can hold one or more tokens, but nominal fields can only hold one category. Numeric fields are permitted to store bytes, integers, floating point numbers, formulae or map references whilst Formula fields work like cells in a spreadsheet and can involve any other numeric fields in the datafile along with numbers and arithmetical operators. Map references allow accurate plotting of locations and features on KeyPlus maps.

On the map

KeyPlus maps are not part of datafiles but may be loaded after the datafile has been loaded. A map contains features such as Rivers and National Borders which may be switched on and off. Records containing map references are plotted on the map and can be selected by clicking and dragging across an area to include the required items. Release 3.0 includes the facility to handle polar and pacific projections in the maps.

Searching for specific records, or groups of records, from a datafile can involve any number of conditions using the operators AND (both), OR (either) and EOR (either but not both), and search criteria can involve excluded data to provide a NOT option. The results of a search, or the original datafile itself, may be sorted on any number of fields in ascending or descending order.

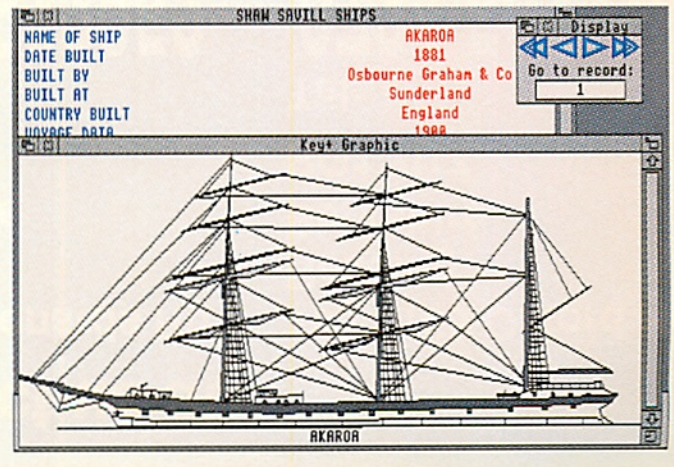
The Display option, from the main menu, allows whole or selected parts of records to be displayed. Graphic fields in datafiles contain pictures, as either sprites or Draw files and these can be displayed on-screen, along with the record and exported if required. Explain is a really helpful option that provides explanations of the purpose of the datafile and of the contents of each field.

The word 'Graphics' also refers to graphical output and KeyPlus provides a wide range of graphs and diagrams. There are three types each of Pie chart, Bar chart and Line graph, as well as two or three-set Venn diagrams and Scatter graphs. Graphs and diagrams may be exported in a variety of forms including scaled sprites and Draw files.

The Features field is the newest addition to KeyPlus. It enables all features associated with selected records to plot on to KeyPlus maps. Imagine selecting records from a datafile of all the Railways built between 1800 and 1850. The resulting map would display the railway as at 1850. Features will be useful for canals and coal fields as well as railways initially, but it is expected that many other curriculum-relevant suggestions will occur.

KeyPlus is an extremely powerful relational database management system which meets curriculum needs and provides support in a number of subject areas.

DAVID WATKINS



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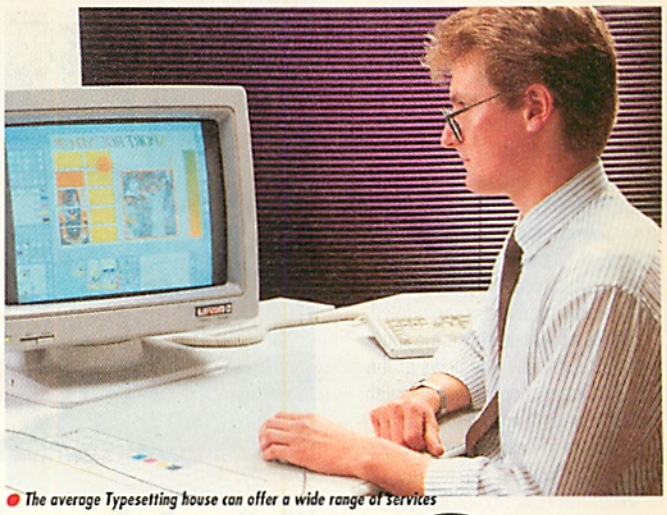
Improve your print quality as we take the lid off imagesetters



The average Typesetting house can offer a wide range of services

Join the Image Set

On a stifling summer's day, Kevin strolls barefoot across the humid office and falls lazily into a chair. He nudges the mouse on the desk to awaken the screen display that dozed off some time ago. With a few swift movements of the rodent, a file is sent hurtling down a cable to a machine - only a blinking indicator betrays the activity going on inside this featureless, metal box.

After a seemingly endless wait, the box decides to communicate with it's master with a short beep. Briskly, Kevin walks over, pokes at a touch pad and lifts the lid. From inside he pulls a large black cartridge. This he carries to a nearby machine with a steeply pitched cover. Pipes dangle beneath like tentacles, drawing clear liquid from vats. He carefully places the strange black cartridge into a covered tray and the machine roars into life. Pumps and fans whirr noisily when, finally, from a narrow slit in the cover's top, a sheet of film covered in black markings glides smoothly out. Pulling white gloves onto his hands, Kevin rolls it up and heads for the guillotine on a worktop close by.

This is my first recollection of a slightly unusual typesetter at work. He operates an imagesetting service bureau called Type Studio here in Peterborough. It is through this company that I became versed in the lore of imagesetting. To many people this is an awe inspiring, mystical art of which little is known. In this article, I hope to blow away the hazy veil of smoke that enshrouds the subject and give you a clear picture of the benefits it can bring. Let's get one thing straight right away, in no way do I claim to be an expert, but I have trudged some way up its long, steep learning curve and am well versed in the technicalities and pitfalls of professional output.

Computers are linked directly to the scanning and Image setting equipment

Jargon is explained in the glossary of terms.

What is it?

An imagesetter is the ultimate laser printer. It produces pages of crisp, clear type and artwork ready for reproduction by a professional printer. A roll of bromide photographic paper or film is exposed by a computer controlled laser beam. As the beam is moved across the film it marks it with tiny dots. These are packed densely to build up an image in a similar way to pixels on a computer screen. After exposure the film or bromide is processed using chemicals. The result is a perfect, ultra-high resolution image of the page. Most desktop laser printers produce pages with a resolution of around 300 dots per inch (dpi), superior imagesetters can achieve image resolutions of up to 2540 dpi. Like laser printers, Imagesetters are made by a number of companies and those you may have heard of include Linotronic, Scantext and ECRM. And, before you nip down to your local Acorn dealer to buy one, stop off at the bank and organise a mortgage - even the most basic models cost in excess of £50,000.

Before the page image is beamed onto the film, it is formed in the imagesetter's memory. A built-in computer called a Raster Image Processor, or RIP for short, waits for a description of the page to be sent to it. This tells the RIP what text appears on the page, its size, typeface, colour and so on. Vector drawings are defined as lines, curves and circles each with co-ordinates, line length, colour and thickness details. PostScript is the language most commonly used to describe the appearance of the page. There are PostScript commands and procedures to draw everything from a dashed line to a fountain fill. Bitmaps can be included in the PostScript program and are described pixel by pixel. When the RIP has finished forming an image of the page in memory it begins imageing by beaming the page onto the film using a laser as mentioned earlier. This internal view of imagesetting is useful for you to understand the problems which you may encounter when you have pages set.

Is it for you?

The quality of your page reproduction may not be important if you only need a hundred flyers announcing the date of this summer's village fete. A few hours at the keyboard, one or two laser prints and a hundred photocopies will do the trick. For those in business and professional design, the best quality reproduction is cardinal.

The Human eye is a miracle of bio-engineering. Along with our brains, they perform incredible ➤

GLOSSARY OF TERMS

Bromide	*Light sensitive photographic paper used in plate making*
Chromalin	*A colour proof made using a dye-sublimation printer direct from separated film.*
Dot-gain	*Effect where ink spots spread on paper causing colours to appear darker.*
DPI	*Dots per inch. Used to indicate the resolution of output. The higher the figure, the greater the definition.*
Film	*Light sensitive film used to produce printing plates*
Font matching	*Pairing Acorn outline fonts with its PostScript equivalent*
Halftone	*A pattern of minute dots which appear as a shade of grey when printed*
Imageing	*Exposing film or bromide with an image of a page.*
Imagesetter	*Machine which prints pages onto film or bromide paper*
Lpi	*Lines per inch*
PostScript	*Page description language, trademark of Adobe corporation*
Process colours	*the four colours used in full colour printing: Cyan, Magenta, Yellow and Key (Black), also known as CMYK*
Reprographics	*Process of preparing pages for printing*
RIP	*Raster Image Processor, the computer which draws page images*
Screen resolution	*The number of dots in halftones, they are more noticable at lower resolutions*
Separations	*A full colour image converted into its CMYK components*
Spot colour	*A colour which is printed in addition to black*
Strip in	*Combine two films*
Typesetter	*Another term for imagesetter or the person who operates the machine*

feats of image processing, recognition and manipulation, all at a staggering resolution. We can discern tiny details and pick out irregularities instantly. A curved line, printed at low resolution looks rough and jagged. At higher resolutions, the same curve appears much smoother. Text is more readable when printed at high resolution because the mind is not distracted by tiny flaws at the edges of letter shapes. Pictures with perfectly smooth lines and shading plus masses of detail have a tremendous impact without looking messy.

When we read text or look at a picture on paper it is not only the obvious content of the words or image that create an impression but also the presentation and physical medium used. For example, if you received a letter from someone claiming to be an important official but before reading it you noticed it was written in crayon on a piece of rough note paper, you would immediately become suspicious, no matter what was written. The same principle applies to printed material you produce whether it is a book, manual, letterhead, advert or whatever. If presentation is poor the reader's confidence in what the text and pictures say is undermined. Laser prints and photocopies are cheap but lack the inference of quality that is embodied in print reproduced from imageset film. If you want to your audience to take you seriously, go for imagesetting.

The Macintosh is an industry standard system for publishing

What's up Doc?

The three main elements in Desk Top Publishing and word processor documents - namely text, vector graphics and bitmaps - all present problems when imagesetting. I will highlight the pitfalls and suggest methods of avoiding them. Purposely looking for dangers while putting your pages together saves stress, time and money later on.

Text

There are thousands of different typeface families available for use in imagesetting. Most machines have a built-in hard drive crammed full of typefaces. In order for a font used on your page to appear correctly on film it must have a PostScript equivalent. It is possible to download an Acorn outline font to a PostScript imagesetter under RISC OS 3 but it is not recommended, as imageing takes much longer. When choosing a font to use on your page, you should find out from the vendor if it has a PostScript equivalent. Usually, the documentation on the font disk explains what the equivalent is. Many PostScript typefaces are virtually indistinguishable from the Acorn font. Some familiar examples are Homerton, Trinity and Corpus which equate to PostScript's Helvetica, Times and Courier respectively. Lastly, ask the bureau if it has matching PostScript fonts installed in its imagesetter. Although it is likely to have a vast library of typefaces, it is still worth checking to avoid mistakes.

If no PostScript equivalent is available you need to take evasive action. Headlines, captions or titles are more likely to use a decorative font which has no PostScript match. If you use it in just a few places you can convert the text to outlines and include it as a Draw file. ArtWorks and RISC OS3 Draw let you do this easily. RISC OS2 users have the choice of several commercial and PD utilities which do the job. Now drop the Draw files onto your page layout to replace the original text and the problem is gone. It is impractical to convert body text to Draw files in which case you must change to another, PostScript compatible font. Text which is imageset using a font with no equivalent always appears as Courier (Corpus) on film.

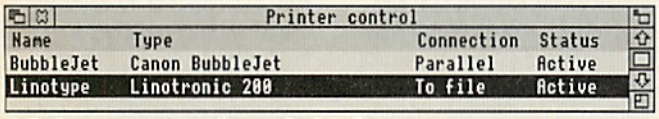
Vector Graphics

Draw artwork is much more popular than bitmap graphics because it is more compact and can be scaled without loss of resolution. Simple pictures render quickly on an imagesetter and look wonderful in print. However, there are drawbacks (no pun intended) which you should note. One of these is the 'thin line' curse. Drawing programs let you set the line to various thicknesses including 'Thin'. Beware, as this is lethal and should be avoided like the proverbial plague! Never use it when imagesetting, as it instructs the output device to draw the thinnest lines it can. Imagesetters can draw lines 1/2540th of an inch thick at 2540 dpi. At this thickness, the ink on the printing plate is not retained and your lines will vanish from the page. Archimedes World suffered a bout of this affliction a few issues back when a map and other artwork mysteriously disappeared! It deceptively showed up on a laser proof because the thinnest lines a laser printer can produce are quite visible.

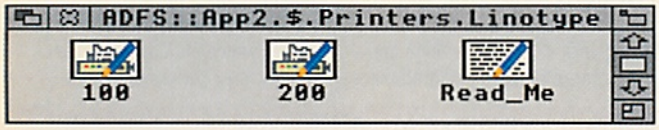
A monster that gives RIPs nightmares is the Draw file generated by a tracing program. The problem stems from objects within the Draw file. They are generated algorithmically and may finally contain thousands of points, more than any human artist would ever include. A RIP has a stack in memory where it can store object outlines before drawing them. It was assumed that no single object in a drawing would have more than a few hundred points on its outline. When it is faced with a massive object with multitudes of nodes it can cause the stack to overflow. The poor, befuddled RIP utters a whimper and comes to a grinding halt. To combat this, check Draw files created by outliner programs to ensure that objects are not too complex.

Manipulating a Scanned image on professional equipment

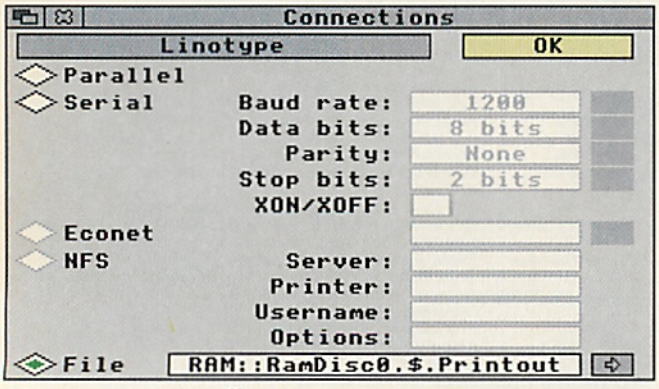
Related to the trace monster is the blend bogeyman. Although they produce beautiful shading, blends can tie up an imagesetter for ages as it draws each and every interpola-



The Linotronic printer driver will create a PostScript file



RISC OS 3 users have a choice of two Linotronic drivers



Printers' connection panel set to file output

tion. Flood fills present a similar problem. Time is money to a bureau and you may find yourself with a hefty time surcharge on your bill if you do not warn them that the file may take a long time to run out. Keep your vector images as simple as possible and you will have few difficulties.

Bitmaps

These can be images as varied as a grabbed Desktop screen, scanned photograph or digitized video picture. Sprites are the standard bitmap format on Acorn computers, being compatible with all art and design programs. Including them in your imageset pages is simply a matter of placing them in the document. Greyscale pictures look superb when printed from imageset film. Halftones, the minute dot patterns that print as shades of grey, are smooth and completely uniform. For the best results you should ensure that the palette of a greyscale sprite ranges from 10% black to 90% black. This avoids areas of solid black or white which look like blotches on the picture. The software which you use to scan greyscale photographs should provide some option for

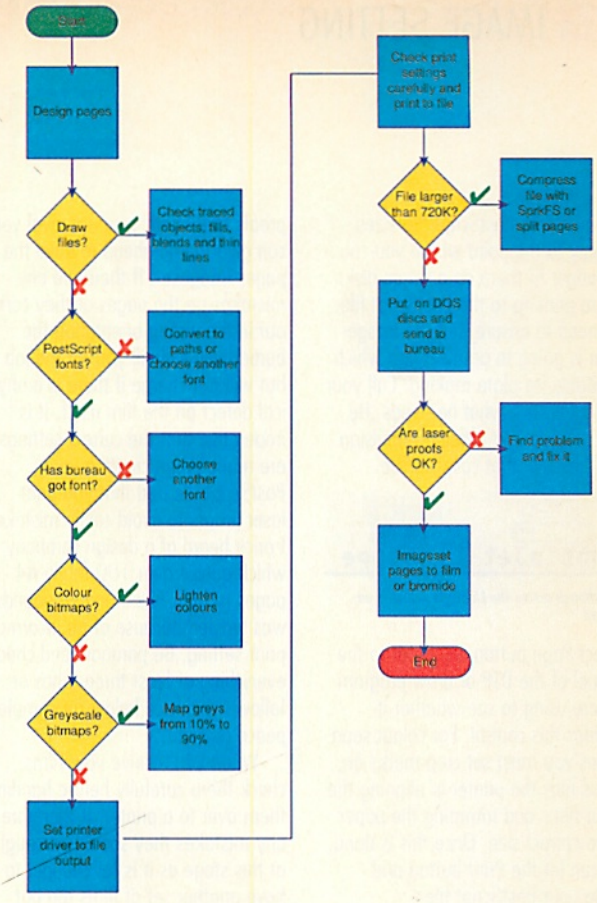
altering the palette. Print quality comparable to this magazine can be achieved with a screen resolution of 133 lines per Inch (lpi) when imagesetting at 1700 dpi.

Four colour printing is a minefield on the Acorn. Screen dumps look fine but colour scans are terrible, especially if they are dithered. An effect called dot-gain, where ink dots spread wider than they should, causes colours to appear darker on paper than on screen. Colours on paper are formed by reflected light and this is not as intense as light emitted from a monitor. The only way to correct this is to lighten the bitmap colours. Brightness and saturation control is limited as the 256 palette entries in standard sprites are not independent but only four shades of 64 colours. Image processing applications such as Revelation Image Pro enable you to make some improvements. A new true 256 colour sprite format has been defined by Acorn and is supported by Impression II and ArtWorks. All we need now are some decent image manipulation programs to take advantage of it fully.

The last nail in the colour coffin is the colour separation software. Computer Concepts has provided the only PostScript colour separation utility in the form of ExpressPS. This simply tells the RIP to separate the page into one of four process colours. The RIP dutifully obeys and spends a lot of extra time doing this work. Remember that your bureau may charge extra for long jobs so avoid having too many bitmaps on each page.

To speed things up you can simply output the page without bitmaps and then get your bureau to strip in colour photographs. This produces good results but becomes very expensive if you have more than one photo per page. Another possibility is to convert the page layout and bitmap into a form which can be put together on an Apple Mac or PC and ask the bureau to output them from there. Your page design could be created in ArtWorks and output as an EPS file. It could then be imported into a program such as Adobe Illustrator or Corel Draw and then the bitmap can be dropped into place. The superior separation software on these other platforms produce colour output of a higher calibre but again, watch the costs. For more details on how to convert sprites into a form which can be ported to other platforms please refer to my Moving Pictures articles in the March and April 1993 issues of Archimedes World.

Limited colour, although serious, is not as critical as many people think. Most print work is monochrome or spot colour. Full colour printing is still far more expensive. One London based printer told me that 80% of its work is single colour.



Despite the fact that the company uses an Apple Macintosh Quadra 800 with a 24-bit colour display, he candidly admitted preferring to use the Acorn 540 running 4Mation's Vector for creating page layouts. The 540 is more reliable than the Mac and is easier to use - he says. What makes up the bulk of the print he produces? Stationary. Yes, letterheads, compliment slips and business cards are the bread and butter of jobbing printers. For this work Acorn computers are more than adequately qualified.

PostScript generation

At this stage you should be convinced of the advantages of imagesetting. You have been warned about problems that often arise. Now comes the really hard part - outputting to a PostScript file. If you are still running creaky old RISC OS2, load up the PrinterPS driver. Click menu over the PrinterPS icon and enter the file path into the File item submenu. Trendy RISC OS3 users should run the Printers program. It can be configured to output PostScript simply by dragging the '100' or '200' printer definition files from the Printers.Linotype directory on Applications Disk 2 to Printers on the icon bar. It will be added to the Control window. Click menu over the Linotype entry and choose the Active menu item. Now choose the Connections option from the same menu and select the File radio button. To set the filepath click menu over the arrow icon at the bottom right of the window and drag the PostScript file icon to a filer window. The path is set and the PostScript files which you create will be saved to the disk specified. If you can't find Printers or PrinterPS try looking on the application disks which came with your computer.

Font matching

To get Acorn outline fonts to appear correctly on imageset film, you need to tell the PostScript driver what the equivalent fonts are. This is done by font matching. Inside the PrinterPS application directory is a file called PSprolog. You should load this into Edit. At the end,you will find a list of font equivalents. Add new fonts to this list making sure that you use the correct format:

```
/Trinity.Medium /Times-
Roman Latin1Enc FF
```

Trinity.Medium is the full name of the Acorn font and Times-Roman is the full name of the PostScript equivalent. Make sure that the font names start with a slash (/) and they are spelled and punctuated correctly. Now save the PSprolog file.

RISC OS3 provides easy font matching using the FontPrint application. It is important to remember that any unmatched fonts will be downloaded to the imagesetter and this results in longer imageing times (which may cost you extra) and ➤

also increases PostScript file sizes - possibly to the point where you can not longer fit them on a single disk. Before printing to the PostScript file, you need to ensure that the imagesetter is going to produce film which is suitable for plate making. Call your printer and ask what he needs. He may ask for right reading, emulsion side down, in that case set the

● *Although active the Linotype driver is unselected*

Reflect Page button on. Refer to the manual of the DTP or draw program you are using to see whether it provides this control. For colour separations you must set crop marks on, as this aids the printer in aligning the colour films and trimming the paper to the correct size. Once this is done, you can hit the Print button and create your PostScript file.

The BIG squeeze

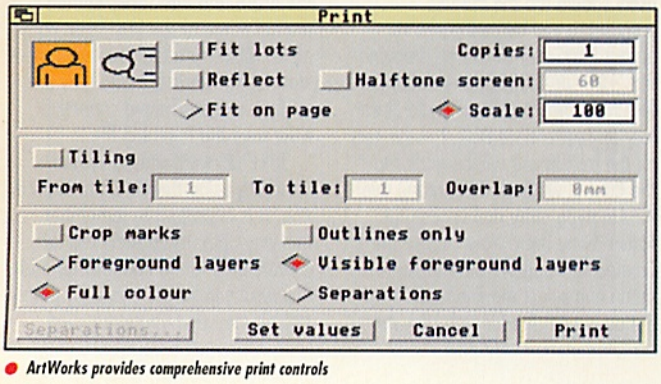
Getting a PostScript file from your computer to the bureau may prove difficult if it is more than 720K in size. This is the maximum size of double density DOS disks which your typesetter will read. RISC OS3 provides PC DOS disk formatting and writing as standard but RISC OS2 users will need a utility such as MultiFS to handle DOS disks. High density drives under RISC OS3 can format 1.4Mb DOS disks which may prove large enough to hold your file. If your document contains multiple pages, try outputting each to a separate file and spreading them over several disks. Alternatively, you could archive it using SparkFS. Check to see if your bureau has a utility which will decompress the archive. Another option is to send the file down the telephone line via a modem.

Once the PostScript file is in the hands of the bureau, you should ask for laser proofs to be printed first. This will reveal any problems and corrections can be made. If the proofs meet with your approval you can give the go-ahead to have the pages imageset. If there are any mistakes on the pages or they come out in the wrong orientation the bureau will still bill you for the job but will not charge if there is a physical defect on the film itself. It is imperative that the correct settings are made when creating your PostScript file and that you print laser proofs to avoid costly mistakes. I once heard of a design company which output over 100 faulty A4 pages to film. Five hundred pounds was wasted because of an incorrect print setting. Be paranoid and check everything at least three times or follow my advice below for complete peace of mind.

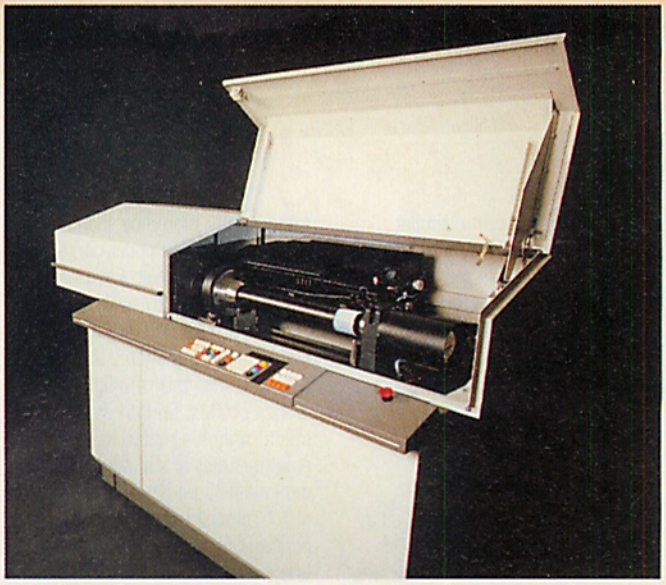
When you receive your films, check them carefully before handing them over to a printer. If there are any mistakes they should be caught at this stage as it is far cheaper to have another set of films run out than to organise a complete re-print. For spot and full colour work, the bureau will have checked the registration before giving them to you. Having said that, it is worth spending some extra money to have a cromalin match proof made. This is a one-off print made directly from film and shows exactly what the final colours will look like. Any registration problems will be immediately apparent and if so, new films can be ordered. Give this match proof to your printer as a guide to the quality of colour he should aim for.

Don't bother!

Now that you have a clearer idea of what is involved in creating PostScript files for imagesetting, my advice is don't bother! Unless costs are critical you should let someone else do it for you. There are so many problems involved in the process, so many mistakes that can be made, that you are better off leaving it to the bureau to do the PostScript output themselves. Obviously you can help by not including problems in your documents at the layout stage. The rest of it, you should leave to the professionals. It will save you both time and money in the long run.



● *ArtWorks provides comprehensive print controls*



● *A professional Drum scanner can achieve image reolutions that are far greater that traditional a hand held or flatbed unit*

Several firms have started to advertise typesetting services for Acorn computers. The most impressive is T-J Reproductions. These guys know their onions, Apples and Acorns! Being Acorn literate, the boys at T-J speak your language and know all about the software you are using. In fact, T-J is the London based printer I mentioned earlier that prefers Acorn systems over high-end Apple Macs. It not only does imagesetting but also printing and finishing. As a result it offers a complete range of design, reprographic and printing services to Acorn users. Everything from simple A5 bromides to a disk-to-print service. Just send your disk and leave the worrying to someone else. If the film output is wrong, you don't have to pay for it unless the fault lies in the document you supplied. I cannot stress too much how big a difference using such a service can make to your productivity, cash flow and peace of mind.

T-J is also the publisher of re-Print which it describes as 'an interactive publishing solution'. Each issue consists of a magazine, paper samples, print method examples such as block foil and a disk full of software. The magazine is packed full of advice, tutorials and guides to help you improve the quality of your design and print. The disk contains template files for use with popular DTP and drawing packages. Playback sequences demonstrate design techniques. Readers also get free fonts, clip art and useful DTP utilities. re-Print is only available by subscription at an annual cost of £68. This is what Acorn based designers and desktop publishers have been crying out for. If you use an Acorn computer to do any sort of printing you should consider a subscription to re-Print. I have sent in my order and am eagerly awaiting the first issue.

This is a decorative font
and so is this one too!
This font is from the PD.

Conclusion

Imagesetting is not some magical art that is passed on from father to son - though it used to be. Today, electronic imagesetting is littered with problems. If you heed the warnings, you should be able to use a typesetting bureau even if it has never heard of Acorn. The best solution is to use an Acorn literate bureau.

MATTHEW FIFIELD ●

FACTFILE

Acorn Bureaux:

Recommended Reading:
ArtWorks Commercial Printing Guide
re-Print

Supplier: T-J Reproductions
25 Parkway, Burnt Oak, Edgware,
Middlesex, HA8 5EY.
Telephone 081 381 2455
Fax 081 905 6653

Supplier: Micro Laser Designs
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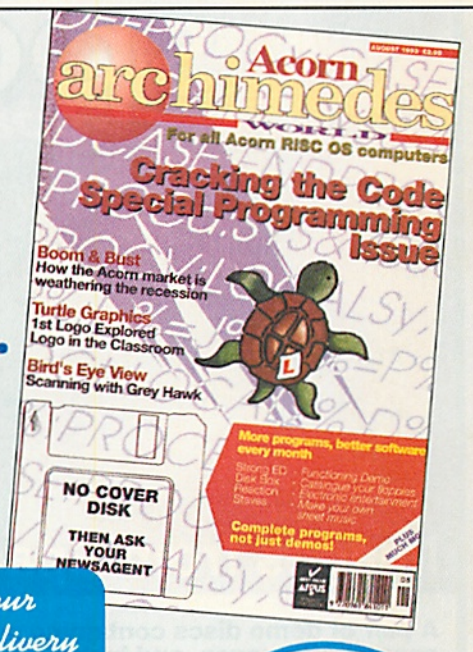

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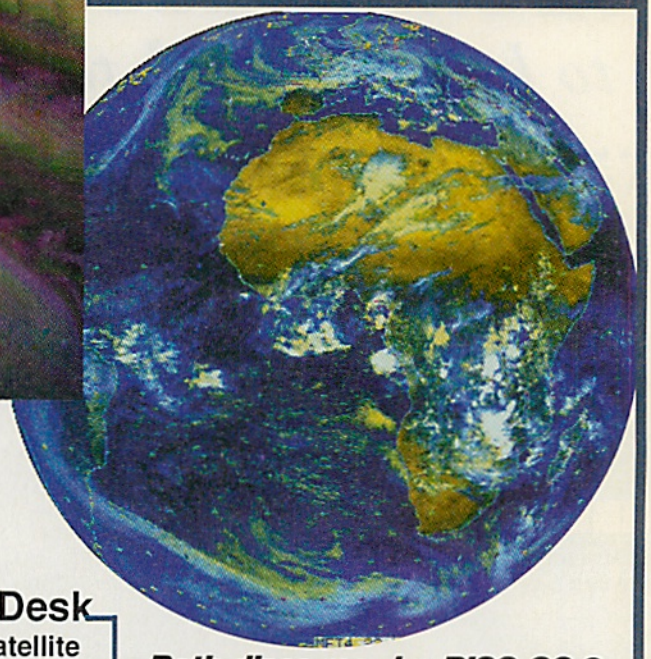

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Runnin a book

Alan Bennett takes an exclusive first look at a new DTP package for schools

The Graphics toolbar

Book making is a common activity in most Primary schools. From an early age, children are encouraged to write their own story, illustrate it, design a cover with the requisite blurb on the back and bind it. Kids are proud of their own books; they like to put them in the class book corner alongside published paperbacks and share them with their friends.

Children use a variety of literary forms ranging from longer stories, subdivided into chapters to picture books and comic strips. A variety of illustrative techniques are used and very often pictures are drawn faintly behind a page of writing. They also learn to tailor their work for specific audiences.

It is obvious that book making is an ideal opportunity to use DTP software on the class computer. However, while packages such as Desktop Folio, Pendown or Junior Impression are excellent for producing posters, newsletters and information leaflets, they don't always offer the degree of flexibility needed for a child's story.

BookMaker, from RESOURCE and Keyboard Technology, was developed after a considerable amount of research into how children write their own stories and offers a new approach to DTP in both Primary and Secondary classrooms. A typical BookMaker page is made up of a foreground and a background layer or canvas, either of which can be a mixture of pictures and writing. Once completed, the pages can either be printed out or flicked through on the screen.

Fully booked

The package consists of three disks and a manual. Disk one contains the main application. There's also a workdisk of various resources, a library disk which has some example books and a Draw file keystrip. Although BookMaker will work on a 1Mb machine, it's best to have 2Mb as this allows you to create larger books.

The program installs its icon on the icon bar and will display the main program window if clicked upon. On the left hand side is the master toolbar which has five icons. The first toggles between foreground and background modes. You can work on each layer individually and whatever you do to one will have no effect on the other.

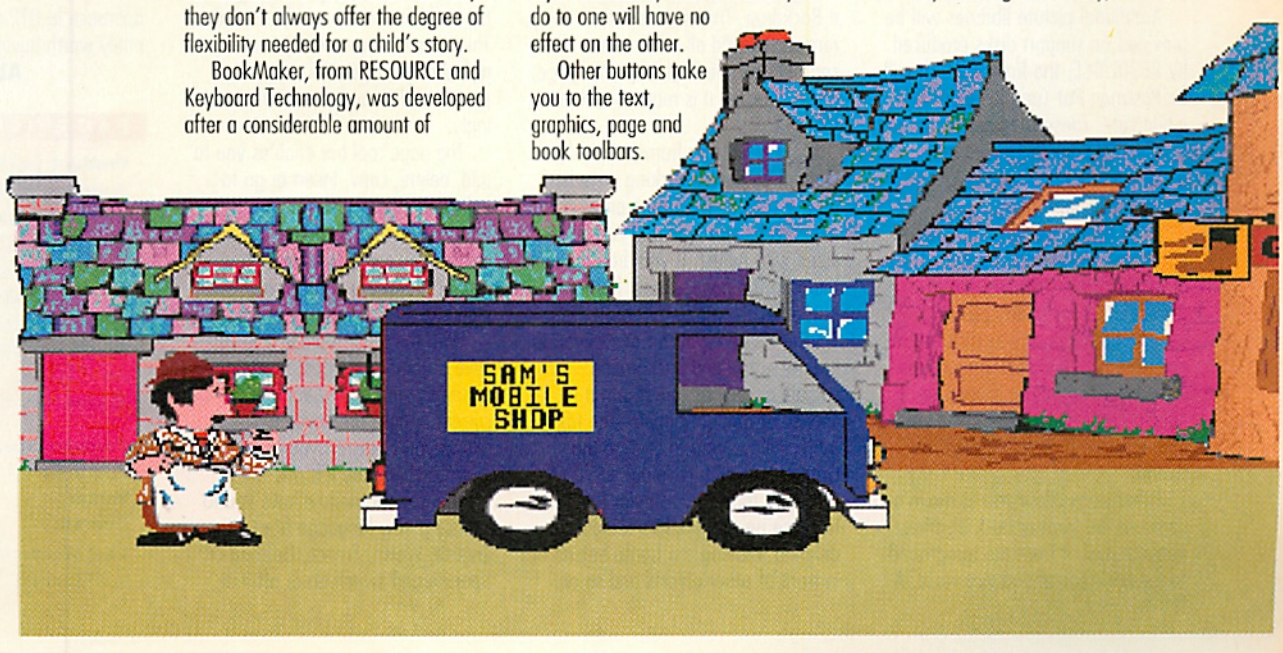
Other buttons take you to the text, graphics, page and book toolbars.

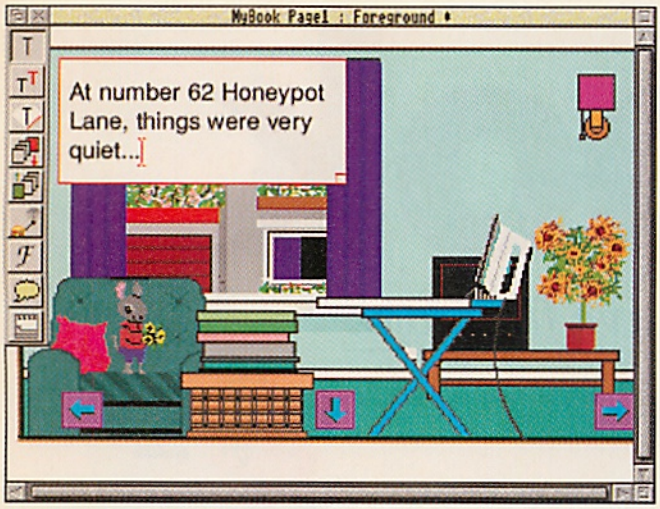
A Postman Pat support pack is also available

These control virtually all the program's functions - it's pretty obvious what most icons do, but as always, the rest can be worked out through trial and error. If you click on the icon at the top, you will go back to the main toolbar, although if you select a text frame or graphic, the relevant toolbar automatically appears.

Turning the page

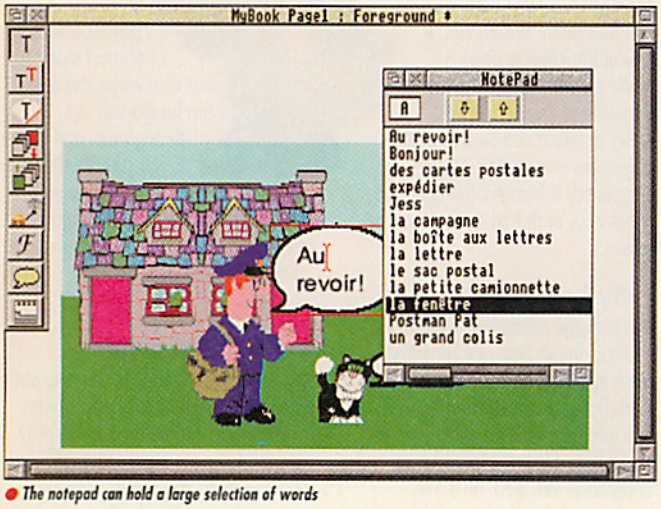
When creating a page it's best to start with the background canvas. Sprites or Draw files can be dragged directly into a page window or, alternatively, you can select the picture directory icon on the graphics toolbar and drag in images from the picture library located in the Picture Book window. This collection is held on a separate disk and contains a range of images including vehicles, hills, trees, people and animals. One advantage of using a library is that graphics are displayed as thumbnails. You can compile your own by creating a directory, ➤





● *We've seen these characters before...*

● *The main toolbar*

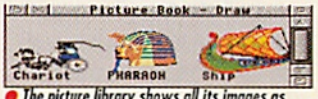


● *The notepad can hold a large selection of words*

● *Both the foreground and background canvases put together*

● *Any tool item can be switched on or off*

● *Text frames can be turned into speech bubbles*



● *The picture library shows all its images as thumbnails*

putting all your Draw files into their own sub directory and then using Paint to group sprites of a similar subject matter into separate sprite files. To establish a path to a directory, you simply drag it into the BookMaker window; pressing Menu over the picture directory icon allows you to select a new library.

Additional picture libraries will be provided on support disks produced by RESOURCE, the first of which will be Postman Pat (and his black and white cat). These may be the better bet for those teachers who are uneasy or uninterested in playing around with sprite files.

Once on the screen, images can be moved around and resized. The graphics toolbar enables you to copy, delete or flip any picture across both axes. If you click on the delete tool with Select, images are copied horizontally or if you use Adjust, vertically. This enables you to manually tile a picture across the screen.

Other icons allow you to move an object to the front or back of other items or push it from the foreground to the background and vice-versa. A succession of objects can be easily grouped and ungrouped at will. BookMaker uses memory efficiently in that all graphics files are shared; copying an image or even an entire page will not reduce the amount of memory available.

Any individual or group of text and graphic objects can be made into a Backdrop. This is a layer that remains behind all other items. There can only be one backdrop on a page; if it is selected it is marked with a large 'X'.

Text is put into frames which are created by double clicking anywhere on the screen. The frame area expands as you type and can be resized with Adjust. If you drop an Edit file onto the page, a new frame is automatically made for you.

The frame type icon allows you to specify frame and background colours as well as turn it into a speech or thought bubble. The text button allows you to change the Outline font and its colour. Most of the other tools have similar functions to those on the graphics toolbar for deleting, moving the frame behind or in front of other objects and so on.

Take note

One tool unique to the text toolbar is the notepad. This is a window that can hold a list of words grouped alphabetically. Select a word and it is inserted at the caret position. New words can be added by the teacher either manually or by dropping a text file word list on the notepad window. This is then automatically sorted into alphabetical order. You can then save it to disk and re-load it accordingly.

The page tool bar enables you to add, delete, copy, insert or go to individual pages, delete either or both canvases and change the page colour. You can also save a page to disk or produce a printed copy using standard RISC OS printer drivers.

With the book toolbar, you can save or print your latest masterpiece or simply start a new volume. All the current options are saved which allows you to restart your work exactly where you left off.

The iconbar menu allows you to choose a new language from either English, Welsh, French, German or Spanish and switch on or off individual icons in each toolbar. When a new language is configured, the title bar, all menu items and most error messages are changed accordingly. The BookMaker Main Menu gives you the option of letting the page window take over the whole screen or scaling it to the size of a particular backdrop.

My review copy of BookMaker was a beta release and didn't come with the full manual. However, KeyBoard Technology tells me that it will be about 40 pages long and will contain plenty of illustrations. A carousel viewing application for books called BookWorm will also be included.

Booker winner

BookMaker is a most impressive program that is very difficult to fault. Despite loading in complex Sprites in all manner of modes, I couldn't precipitate a crash.

The toolbars make it very easy to use. There isn't any of the confusion that can result from using more 'traditional' DTP frames. Far too many software companies pay scant regard to current classroom practice, but thanks to the research that went on beforehand, BookMaker actually does address the literary needs of both Primary and lower Secondary age children. It's likely that different age groups will use it differently - younger kids may use it more for books, while older children may find it appropriate for presenting research or reports.

BookMaker doesn't replace the likes of Desktop Folio or Impression, but it is a refreshingly different approach to DTP and is very definitely worth buying.

ALAN BENNETT ●

FACTFILE

Product: BookMaker
Supplier: RESOURCE, Exeter Road, Wheatley, Doncaster, South Yorks. DN2 4PY. Telephone 0302 340331
Price: £49.95 - single user.
£120 - Primary site licence.
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Additional: Postman Pat support disk - £18.
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Performance: ●●●●●
Features: ●●●●●
Value: ●●●●●
Overall: ●●●●●

Last Words: An innovative approach to DTP in schools

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'Currently the leader of the pack because of its general ease of use, comprehensive nature and high RiscOS factor. A well thought out and well supported program. Recommended' - Arc World, July 1993.

The above reviewer is not alone since all the other Acorn magazines have also given Prophet excellent reviews, but the people who really know how good Prophet is are its users (who are not without a sense of humour!).

The following extract is from a recent letter: 'Just returning Prophet V1.29 for upgrading in due course. Its getting better all the time...if you could get it to go out and take photographs for me while I go windsurfing I think that should probably do it!' - E Williams, Photographer.

Compared with other accounting programs Prophet is a breath of fresh air. The few accounting terms which are used are explained in **clear English** as is the illustrated 188 page manual (see the review in Acorn Computing - Oct 1992). This combined with our **free telephone help line** and **free upgrades** will help ensure you don't go wrong.

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Prophet is fully multi tasking and compliant with all versions of RiscOS. It will run on any of the Acorn 32 bit range of computers with a minimum of 2mb of memory.

Prophet costs £199.75 inclusive of postage and VAT. An entry level version is also available for £10 inc. **which includes the save option** so you can really give Prophet a test drive. (the cost is refundable on full purchase).

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The current version of Prophet has a myriad of extra features based on user feedback and this combined with our policy of **free upgrades** ensure that Prophet will always remain the number one choice for small business accounts software on the Archimedes.There are over 500 Prophet users which include Acorn dealers such as: 4Mation, EFF, Stallion, Spacetech, Davyn, Arm-Tech, Topologika.....

VISA

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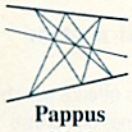

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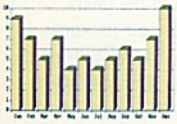

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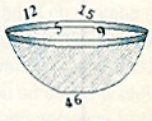

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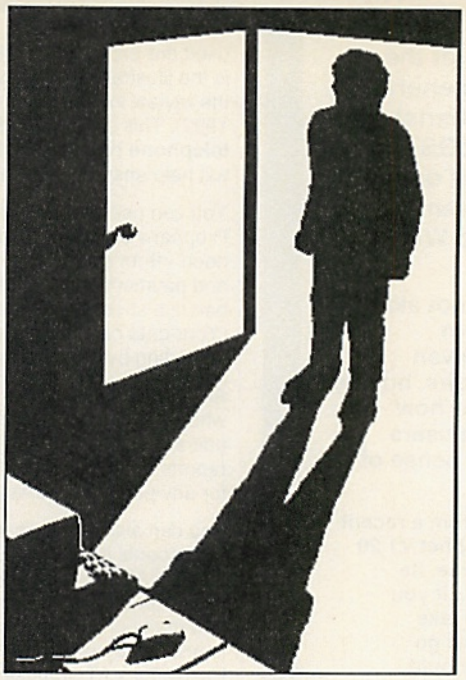


THE CROOK REPORT

Our roving reporter describes today's all too common criminal

Do you work in an educational or other large (possibly underfunded) establishment? Does it use computers on a network or have large numbers of stand alone hard disk machines? Does all of the software have a site licence?

Now is definitely the time to find out because if any computer software is not fully legal, whoever is ultimately responsible could be in for a very nasty shock. Ignorance is no protection in law.

Unfortunately, its not only the person who stops the buck who can get it in the neck. If you want to keep your college or work place running, it is a very good idea to check the legality of all software before someone else does.

Software theft costs the industry a lot of time and money. Computer Concepts alone estimate that software theft and efforts at protection cost £150,000 a year, not enough to cause CC any great damage, but certainly enough to put a dent in the profits, wipe out a smaller company or stop a new one forming. This is an expensive way to do business and so for some time now the software industry has been fighting back.

Although copyright is protected in law, there are simply not enough police on the beat for the authorities to spend any time chasing up pirated programs. So, the industry has formed a Federation to do the job. According to its brochure, FAST, the Federation Against Software Theft, prosecutes one company every ten days. On several occasions, unwary local health authorities, for example, have been heavily fined and have had software confiscated. Not only have they been done for breaking the law, but they have also been charged for the time they used the software. Software pirates, as that is what they are, may also have had to pay a fine directly to the software producers. Just think of the problems that can be caused by losing an entire computer system without warning. Students could even sue for breach of contract if their courses have to be cut if the computer database, word processor or spreadsheet that they have been working with for years is impounded. Naturally, this is not to say that all networks are running illegally, just make sure yours isn't.

Bob Hay, founder of FAST

Fighting back

FAST has been set up primarily as a business to pull back money lost from the PC business market. It does not appear to question the moral or practical reasons against software theft and does not explicitly mention any computer other than the IBM PC or clones. FAST's angle is one of legal threat laced with the hint of increased software support for legally owned copies of programs. This approach falls short of catching the attention of the home user. At £500 membership plus VAT per annum, the price for a 'software legal' establishment being able to proudly display the FAST badge of merit is prohibitive for schools and struggling colleges. While strongly supporting the efforts of FAST and supporting its views, I feel there has to be more of the 'carrot' than 'stick' in any appeal to the public at large before damaging software piracy at home will diminish.

How bad is it?

For the past five years, the Business Software Alliance (BSA) has also been attempting to lower the levels of illegal software use in Europe. In 1991, 5.3 billion dollars of business software revenue was estimated to be lost, with 67% of all software being pirated copies. The news is not all bad. In 1992, only 4.6 billion was lost as by then 58% of software was illegal. The BSA aims to match the European rate with that of the US, where piracy is at only 35%. See, there's nothing to worry about really...

Why should it matter anyway?

Apart from being an offence punishable by unlimited fines and or two years imprisonment, software piracy robs the producer of the funds needed to produce new packages and support those that already exist.

As we all know, it is not only business software that gets 'borrowed'. Apart from CC and the Archimedes, in the Amiga world one software publisher is rumoured to be about to pull out of games production entirely because it simply doesn't get enough money back to make it worth while. It could be argued that in a competitive world, if the game is no good then that's their hard luck, but the game in question is Lemmings. Whatever your taste in games it has to be admitted that almost everyone has a copy of something or other but how many of us have actually paid for it?

It is possible to have at least a

"YOU HAVEN'T QUITE GOT THE HANG OF COPYING DISCS YET, HAVE YOU ?!"

sample of a game on the cheap, but you need to satisfy yourself with the demo versions. When and if you want the thrill of the real thing there is no alternative but to go out and pay for it. The second hand market could hold out some low price hopes, but if the programs are not being written in the first place because companies can't make a profit, they won't ever make it into the small adds. This is just as true for utility software.

Why should any of this interest the honest non-game-playing home Acorn user? Computer Concepts spends almost as much time chasing illegal copiers of its splendid application software as it does in writing new stuff. This is not good for any of us. If CC could keep its efforts concentrated on product development and support, prices could fall and dongles could go hang, if you'll pardon the expression.

The FAST method of keeping business and institutional pirates in line is to tell them how they could be embarrassed in public and financially ruined. Not even FAST could ever bother gunning for the individual naughty copier. At the moment, home piracy is not seen as theft or even as being anything slightly wrong. The home pirate needs to be convinced rather than bullied into realising that it is in their best interest to play it legally.

Coughs and sneezes

It is almost too easy to be a pirate. For my money, most games are not worth playing, a quick go on a demo disk is all I will ever want. But, if a fully copiable version came my way I could once have been tempted to 'borrow' it. Probably it would lie around in a dusty disk box for ages until some desperate games player asked me if I had a copy, then off it would go, multiplying like a virus out of control. I would never have considered myself to be harming anyone but it only takes one cracked version of a protected program to wreck the profit margin of a producer. If this happens once too often, and it looks as if it has in the Amiga market, we will only have ourselves to blame when a producer pulls out.

Cover Disks

Demos of expensive applications are an excellent way to try before you buy. Let's hope this trend continues. A question in these times of recession/slump is what software can be affordably and fully used? There may be little alternative to coughing up for the industry standard product with a full site licence, but schools and colleges could find a cheaper way. The front of this Archimedes World carries a cover disk which often holds some very useful programs. Any program on that disk which has been written especially for Archimedes World is provided with a full site licence (if it is being used by an education establishment) and so long as the magazine is bought by the school, college or whatever, the software can be legally used. There could be a legal problem with demo applications and ones with the Save routines disabled or some games sampler disks. The only thing to do is to contact the producer directly as each house has a different policy. Don't ask the magazine producer - it's not up to us.

PD or not PD

Public Domain software is widely available and is often of very high quality. It is also usable freely and can be copied. But be careful here, Shareware is not the same thing as PD. The idea behind Shareware is that people get the chance to try before they buy. If a user likes the full program on their Shareware disk it is expected that they will register their copy and receive the right to use it long term. They often also get upgraded versions and a full user's manual.

But even that is not the full story. Shareware and Careware programs from Archive magazine are different in that they can be used freely as long as they are not re-sold or distributed for profit over and above the cost of the blank disk and handling charge. This is also how many so called PD or Shareware distribution houses work.

Each individual PD or Shareware type program has a Readme file which the user must abide by. Many user groups publish magazine disks containing what may or may not be PD software. To be sure of your ground when intending to use these programs contact the original publisher or distributor. The golden rule must be 'if in doubt, don't'.

Bring out your dead

There is another cheap and cheerful way of providing software. In the days of the much loved BBC B, thousands of very good programs were written. Granted, they don't look as flashy as the new stuff, but that need not detract from their usefulness in a teaching situation. Schools which have been using BBC micros for years with fully legal software could have a problem when upgrading to the Archie. One of the main reasons the A3000 is so widely used in schools is that when it was launched the advertising blurb said it would run all the old software. Many IT teachers know, to their cost, that this is not quite the case. Apart from the task of getting old BBC programs transferred and then working, the question that should be asked is is it legal?

If you ask a few producers they may well say no, but according to Acorn the answer is yes. Acorn produced the 6502 BBC emulator for just that purpose and, if pressed, Acorn will give any user written confirmation. The stipulations are that as long as the BBC software was originally bought legally with a full site licence then the user is allowed to copy and even alter it so that it can be run on a network of Acorn's new machines. These, too, are considered to be covered by the original licensing agreement. There has been no test case of this as yet and so the prudent (or those not able to make the transfers) may opt for something else.

In the educational realm, SEMERC (the Special Education Micro Electronic Research Centre) has produced a great deal of software. Everything in its 'Blue File' is very low cost and very high quality, having been designed under the watchful eye of practising teachers, if not written by teachers themselves. SEMERC doesn't just sell to local education authorities but also to hard up parents. It is another 25% cheaper if you take out SEMERC membership (but that would cost £250 a year). SEMERC is happy for people to transfer old BBC programs and run them on Archies. The only concern is that the converted programs are not then sold for profit or used by people who are not covered by an original BBC site licence.

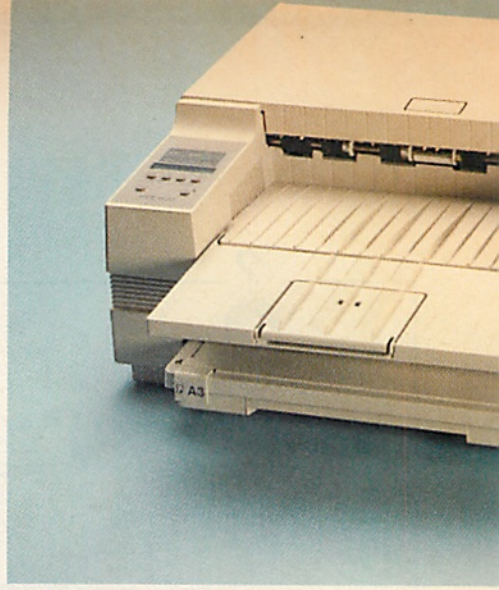
It doesn't have to be like this

After all's said and done, there is no real substitute for the serious user than to get the best available software and pay the full going rate. But there is still a way to make savings. By carefully reading the licensing agreements, matching them to a system's requirements and enforcing an on site software protection policy, establishments can buy certain products in bulk at very much reduced rates.

If every establishment in the country had paid for all its site licences, there could well be more software around for the rest of us to buy. If every program in a home user's disk box came with a receipt, the price written on it would be lower.

It could be worse. Licences for PC/IBM software are two or three times the price of anything on the Acorn and a PC is far less pleasant to use.

SIMON ANTHONY



The prime reason for DTP is achieving a good quality printed output.

Print and be satisf

We take you through the RISC OS options

When you create a document and send it to your printer, the data which makes up your letter or diagram is interpreted by a printer driver so that the printer reproduces, as closely as possible, what you see on screen. The drivers supplied by Acorn and third parties take into account the different ways in which printers build up an image and the different ink cartridges or ribbons that may be available. It is important, therefore, to use the correct driver for your printer and to configure it sensibly for your particular requirements.

RISC OS2 drivers are specific to a particular printer type, e.g. dot-matrix or PostScript, but under RISC OS3 there is a much more flexible approach, with many more drivers becoming available. The Printers application can accept many drivers and offers configuration and control options for it.

The Configure panel is the most important, with its choice of resolutions and printout styles. These usually consist of halftone and dithered options for mono, greyscale and colour (where available). In general, the higher the resolution and the smaller the halftone, the finer the detail in the printout. Lower resolutions and dithering are appropriate to rough proofing and mono printing is suitable for CAD and line drawing.

Printer drivers also control the text printing options. Most applications now print graphically, building up the whole page from dots, but some word processors and databases offer the ability to use the text character designs which reside in the printer, including styles such as Near Letter Quality (NLQ), bold, condensed, etc.. If you are a programmer, you can also use the line numbering and header (title) options for printouts.

Turbocharging

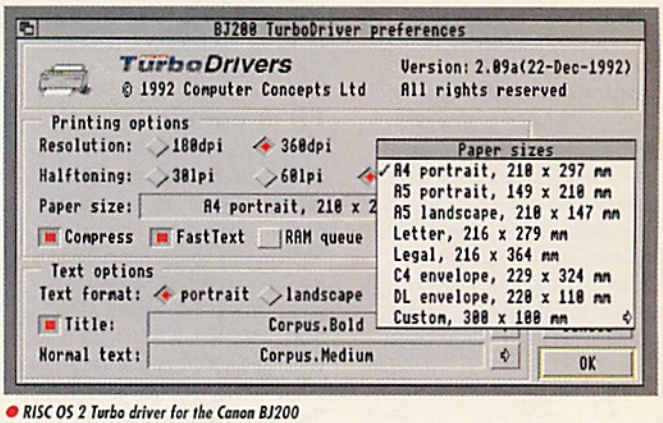
To coin a Computer Concepts' phrase, you can turbo charge your printing by purchasing a third party printer driver. These either improve on the Acorn original or provide for a printer which has been introduced since the last release of Acorn's set. The rapidly expanding product ranges from Canon and Hewlett Packard, as well as Epson's ESC P2 language, come into this latter category.

On the other hand, things are changing at the computer display end too, with the introduction of new forms of graphical sprite which have extended palettes and can therefore provide more information to the printer. Old drivers will just ignore this new information so a new driver is required to do justice to the new display, for instance Ace's ProDrivers provide support for 24-bit colour information. Whether the printer can do justice to it is another matter.

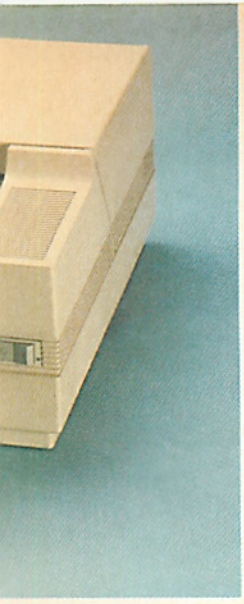
Hewlett Packard drivers

Ace Solutions provides two levels of improved support for RISC OS3.1, Standard and Pro. The Ace standard driver supports Hewlett Packard colour printers and compatibles. Existing RISC OS2 standard driver owners can upgrade to the RISC OS3 drivers for £5.00 by returning their original disk.

The ProDriver moves up a level and, to do so, introduces an updated



RISC OS 2 Turbo driver for the Canon BJ200



CHOOSING A PRINTER

Actually choosing a printer for desktop publishing work will depend on your means and your needs. There is a vast array of machines on the market that suit every need from simple draft output on a tight budget to full colour printing where the machine costs in excess of £7,000.

The Cheap Seats

If you're simply dabbling and have little money to spend, an unsophisticated dot matrix printer will suffice. You have the choice of either a 9pin or 24pin unit. The 24pin printer will provide a better image, but costs more. Expect to pay between £120 and £350 for a new dot matrix printer.

For a few dollars more

The bubble jet printer has taken off in leaps and bounds over the last two years. It's popularity stems from its relatively low purchase price compared to it its output quality. The only drawback is that its running costs are generally higher than those of a dot matrix.

More recent developments have seen colour versions appear. Some offer just one ink cartridge slot and driver software requests that you change the cartridge for another colour. More recently, three colours have been crammed into a single cartridge to enable it to print full colour images. Obviously, with the extra sophistication comes higher priced ink cartridges. You should expect to pay between £200 and £2000 for a bubble/ink jet printer.

The price of quality

For a top class printed image, you have to turn to laser technology. These devices are generally large, heavy and cumbersome units that print entire pages in one go. Their running costs are very reasonable; you can expect to get a minimum of 1,000 pages from a single toner cartridge. The price of the cartridges varies wildly depending on the print engine used in the machine.

A laser printer will output images at a minimum of 300 dot per inch (DPI). Like all other printing devices, they vary in speed; some print four pages per minute, others cope with 12.

The Archimedes User has a choice between buying a direct drive unit or a standard printer. The direct drive unit requires a control podule to be connected to the computer and it is this that does a great deal of the work by using the host computer to perform the images in memory. This approach offers huge speed increases and is more flexible. Standard printers are connected via the parallel or serial interface and take an age to print complex pages. The upside is that they are generally cheaper.

You should expect to pay between £500 and £2000 for a standard laser printer and around £900 to £2000 for a direct drive. Currently, Computer Concepts and Calligraph produce complete complete direct drive packages and HCCS has a direct drive card that is compatible with suitable printers.

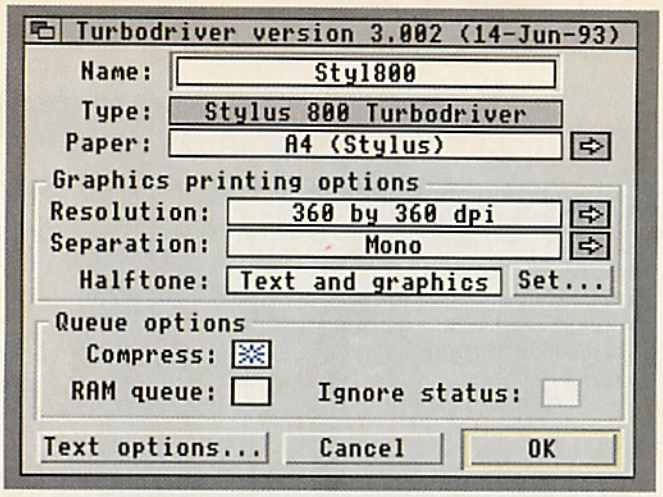
ied

Printers application which replaces that provided on the RISC OS3.1 Applications disks. Because this contains Ace Computing's version of the dumper modules, it forms the basis of a new type of driver which could come to include many printer types. This updated version of Printers supports 24-bit halftoned and dithered output and therefore fits into the trend towards 24-bit colour support, alongside other applications such as ArtWorks and ProImage.

Computer Concepts has exclusively championed Canon printers in the past, but you can now turbo charge your HP DeskJet, including the 550C which is the top of the range colour DeskJet with a separate black cartridge. Moving away from its laser direct concept, Computer Concepts also now provides a LaserJet turbo driver. HP LaserJets are the most popular type of office laser but their features have been sadly under-utilised by the previously available Acorn drivers.

Canon drivers

Computer Concepts' Turbo Drivers take over from the equivalent Acorn drivers rather than adding to them and, in some cases, their driver is the➤



The new RISC OS 3 Turbo drivers from Computer Concepts support Canon and, new to CC, Hewlett Packard (HP) and Epson inkjet printers and HP laserjets. These are the very latest desktop printers and deserve the proper printer driver support these Turbo drivers provide. Although the new Turbo drivers install and look more like conventional Acorn drivers, there are a number of additional options including separation and choice of halftoning style. The drivers need the special Turbo driver printer cable to operate correctly. If you have one printer which operates from a Turbo driver and another from a conventional driver then you need to swap both cables and drivers

only one available for a particular Canon printer, i.e. the BJ200. The software and hardware is inextricably linked by Computer Concepts' special printer cable which acts as a dongle, ensuring that you have to have one copy of the driver for each machine it's used on.

The driver provides a choice of appropriate paper sizes, resolution (dots per inch) and halftone type. Its interpretation of greyscales is very successful - as you might expect from a company which provides image processing software with its scanners.

On new micros, A5000, A3010, etc., the driver uses the bidirectional parallel port to sense if the printer is turned off or if the paper has run out. Printing takes place in the background, allowing access to other parts of the system as chunks of the item to be printed are sent off into a queue waiting for the printer to catch up.

Ace Solution's standard driver supports the Canon LBP4 and LBP8 laser printers.

Halftones

The standard drivers offer a choice of halftone styles; small, large and dithered. Concepts' Turbo Drivers introduce a halftone dialogue box with control over screen types, angles and density. In this context, a screen is a filter which determines the look of graphics printing.

The programmer's job is to match the resolution and mechanical operation of the printer with the pattern of dots sent to it. The halftone appearance varies with the resolution too, while the threshold for printing certain colours is different and can cause a more satisfactory result. In some cases, such as a complex blend in Artworks, the halftone can't properly represent it. Dithering can handle this sort of blend or complex sprite more successfully.

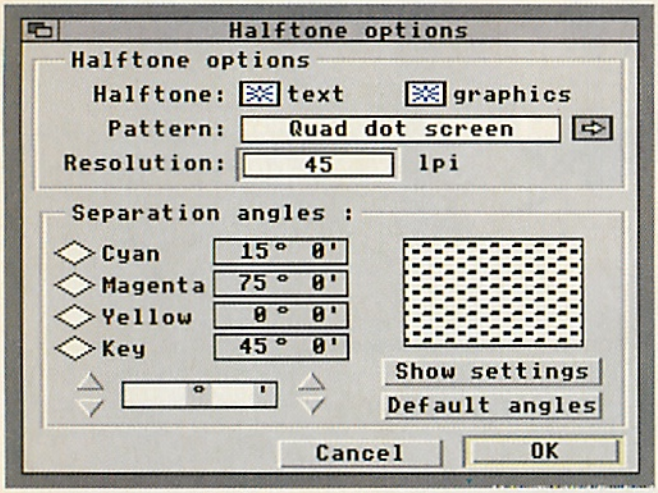
Colour

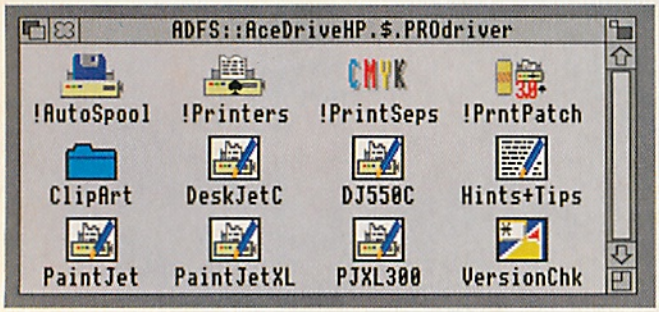
Colour offers a real challenge and the different printing techniques - dot matrix and inkjet primarily - make the most difference to how a screen picture/document appear as hard copy. The colour mix is created by overlaying different inks by multiple passes so quality can be variable on different parts of a page depending on what colours are being printed side by side. The software doesn't seem to be able to do much about this.

Halftoning/dithering is available and the patterns are sometimes quite intrusive when the driver is trying to mix a colour. Dithering is generally more attractive with coloured fonts, providing a textured effect. Having said that, the results from the HP DeskJets and PaintJets are very impressive indeed.

There is sometimes a requirement to print in a subset of available colours, often to suit a specialised process such as T-shirt transfer printing. Another related requirement is to print in colour on a mono printer by switching the ink cartridges after each pass. In order to do this, it is necessary to have software which will extract the ink colours from a screen picture one at a time. Ace's PrintSeps is a separate utility for this which comes with the ProDrivers, while Concept's Turbo Drivers have separation control built in to them.

MARK WEBB





Ace Solution's Pro-driver Printers application offers 24-bit compatible printing

FACTFILE

Product: Canon Turbo driver
Price: £57.57 (inc. VAT)
Supplier: Computer Concepts, Gaddesden Place, Hemel Hempstead, Hertfordshire, HP2 6EX. Telephone 0442 63933
Last Words: Stand-alone driver software and cable so you can shop on the open market for your Canon printer.

Product: HP Turbo Driver
Price: £57.57
Supplier: Computer Concepts
Last Words: Supports all DeskJet and LaserJet printers, mono and colour. RISC OS3.1 and 2Mb required.

Product: Stylus Turbo Driver
Price: £57.57
Supplier: Computer Concepts
Last Words: Supports Epson ink jet.

Product: Standard driver
Price: £18.80. Site licence available.
Supplier: Ace Computing, 27 Victoria Road, Cambridge, CB4 3BW. Telephone 0223 322559
Last Words: RISC OS3.1 driver for a variety of printers unsupported by those supplied by Acorn.

Product: ProDriver
Price: £47.00. Site licence available.
Supplier: Ace Computing
Last Words: 24-bit capable with background printing and colour separation facilities. Very useful for PaintJet and DeskJet users.

Product: ColourSep
Price: £29.38
Supplier: Ian Copestake Software, 1 Kington Road, West Kirkby, Wirral, Merseyside, L48 5ET. Telephone 051 625 1006
Last Words: Utility to organise colour printing on normally b/w printers. Additional colour ink kits are required.

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OUT OF THE DARC

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Okay, let's get one thing sorted out from the off. Yes, Andrew Banner's office does smell (the words glasshouses and stones immediately spring to mind here - Ed). Many people blame the management for the design staff having to stay in the building all night to get the issue out on time. Other theories revolve around the mouldering pile of rival magazines in the corner of the room...

Some more James Pond and Lemmings tips are starting to turn up again. Please, no more - thank-you. While we're at it, no more cheats for Chuck Rock, Saloon Cars or the Chocks Away games. No Nevryon, Holed Out or Break 147 tips either. They are old, they will not get printed and the Post Office will not refund you the cost of your stamp. Neither will the tree that was mercilessly slaughtered for your gratification get replanted.

Komrade Kommandant has spoken. Keep the tips coming! Remember, the fewer people that write in, the better the chance of your being published, so don't write in... er... I think...

ASHLEY COTTER-CAIRNS

Out of the Darc

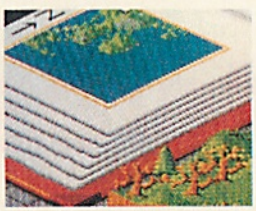
Archimedes World
Argus House
Boundary Way
Hemel Hempstead
Herts
HP2 7ST

Populous

Here's a winning formula for Populous from Alex Nolan of Ormskirk.

Click on the Game Setup icon, then on the custom icon. Now click on Game Options and define them to your wishes. Click OK on the Game Options window only. Now click on Play as Evil. The sleeve on the hand pointer should turn red. Click Cancel on the Game Setup menu.

When the game is restarted, you will be back in Conquest mode and playing Good. Evil will not be able to modify land at all! It gives minimum aggression and minimum manna increase rate. Neat eh? Thanks Alex, enjoy HeroQuest.



Zool

The Bear of St Albans writes in with the cheat for Zool. On the credits screen, type in PICKEREL. The border will flash blue. In the game, press the + key to make Zool invincible. Press PAGE UP to skip stages and the HOME key to skip levels.

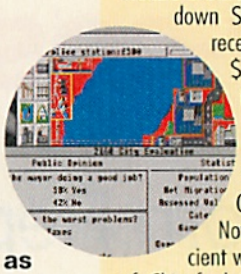
Hey Bear! Are you a hacker? Yeah!? Great! Then it's a matter of professional pride to 'break' a game? Good, then you've already been paid enough by having your name credited with this and so won't want a game.

Another Zool tip from Nik Osbourne of Winsford. On area 1.1, go to the second lamppost (the second white sign with HIT on it) and carry on going to the first wall to the right of this. Once there, stand at the bottom and fire at it several times. The wall then blows away and reveals a large bonus. Also, at the top of this wall, jump to the left to find an extra life.

Sim City

Well, Sim City tips have started appearing at last! One of my all-time favourite games has many interesting nooks and crannies for those patient enough to seek them out.

The oldest are the best. Here's one which works on every version of Sim City from Richard Brunner of Nomansland. Hold down SHIFT and type FUND to receive a special grant of $10,000. But every five times you pull this stunt there will be an earthquake! Nice reminder Richard and enjoy Battle Chess.



Now the harder but more efficient way, from Johnathon Brown of Chingford. He's gone about altering the money files in the program:

```
10 REM LOADS OF CASH WITH
SIMCITY FILES
20 *dir
adfs::HardDisc4.$.Games.Simcit
y
30 INPUT"Filename: "a$
40 file%=OPENUP(a$)
50 INPUT"Cash/ú (0-
2147483647): "Cash%
60 Byter4%=Cash%MOD256
70 Cash%=Cash%DIV256
80 Byte3%=Cash%MOD256
90 Cash%=Cash%DIV256
100 Byte2%=Cash%MOD256
110 Byte1%=Cash%DIV256120
PTR#file%=3108
130 BPUT#file%,Byte1%
140 BPUT#file%,Byte2%
150 BPUT#file%,Byte3%
160 BPUT#file%,Byte4%
170 CLOSE#file%
180 END
```

This grants you £2,147,483,647 which should last you a little while... Thanks Johnathon.

For a shorter alternative, try this from Tim Juretzky of Pattensen in Germany.

Enter the CLI by pressing F12 and load a previously saved city by typing LOAD filename 9000. Now type MEMORY A 9C24 FFFFFF7F. Save the game with SAVE filename 9000+6A70. Type SETTYPE filename DATA and start Simcity, load the modified

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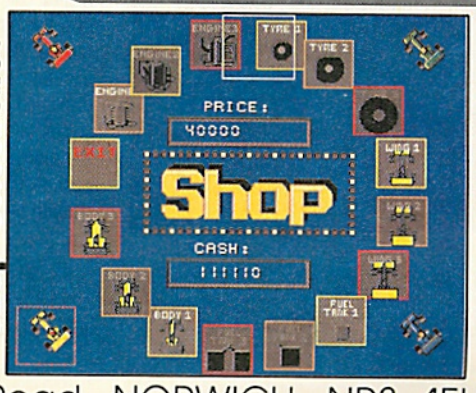
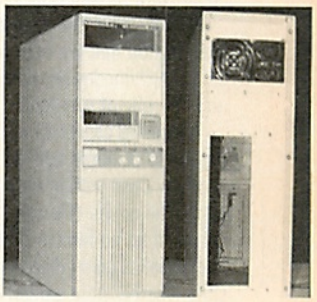


shop screenshot



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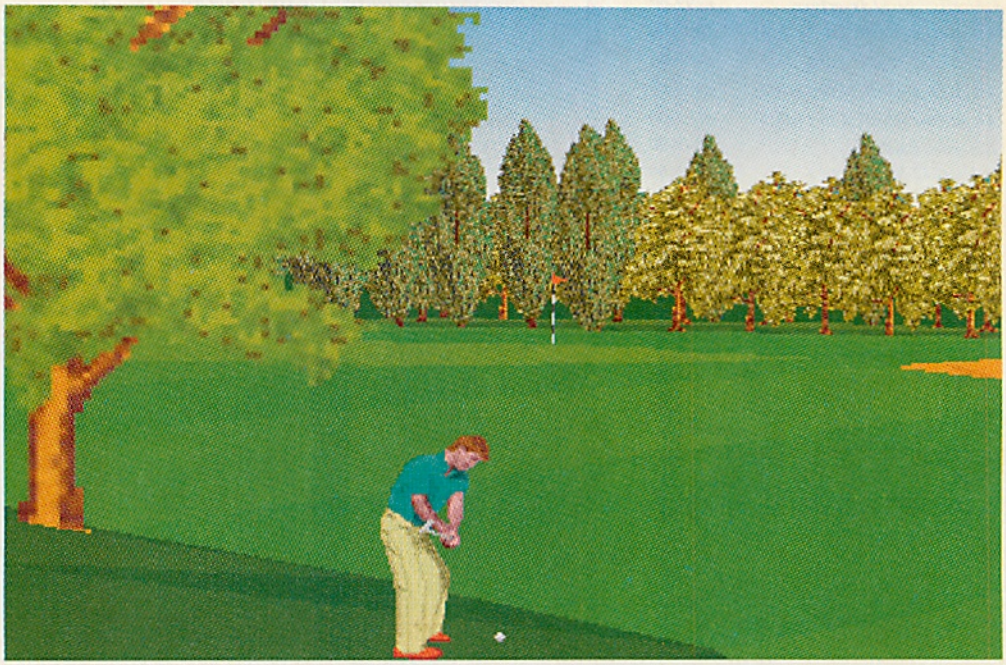
Virtual Golf

Virtually Virtual

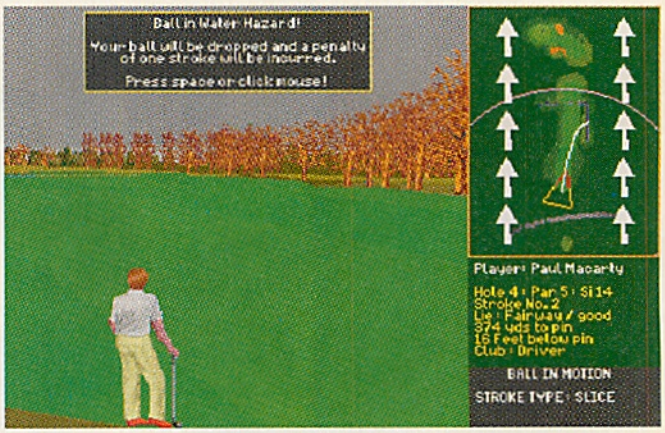
Ahh. Summertime and what could be better than a leisurely stroll around the golf course? Taking it easy, enjoying the sun, playing a round or two - just heavenly. But, then again, with a summer like this year's, who's going to venture out onto a soggy golf course and get rained upon, not me for sure. So, I opted for an alternative, Virtual Golf.

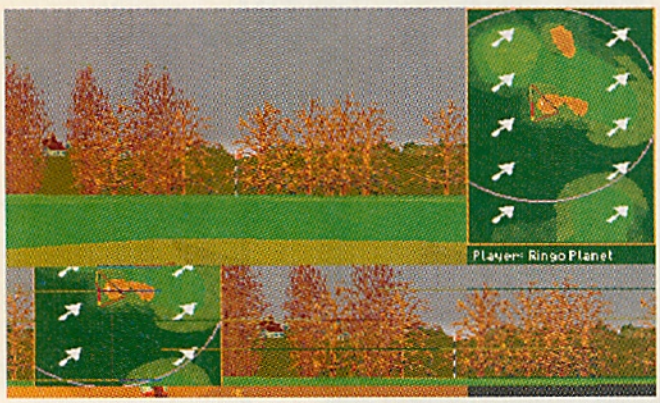


There has been a long running argument about what constitutes a simulation and the differences between such and a game. Well, putting the record straight, a simulation of a sport such as golf is where you've got control over your swing in a natural way rather than judging the position of a bar along a scale. This control might be delivered by using the mouse to determine your swing and its power, as it is in Virtual Golf.

Virtual Golf is the closest thing to a simulation that we have yet seen on the Archimedes but doesn't quite earn the title of simulation.

The game allows up to four players to compete against one another. Upon setting up each player, he or she (though there seems to be no female characters on the green) is given the choice to state whether they are left or right handed and are given a handicap rating. The difference between left and right handed players is that the controls are reversed. Your handicap is set to 28 to start with as it is assumed that each player is inexperienced in the beginning. The only way to alter your handicap rating is to complete the assessment rounds where the computer automatically charts your progress. If you become really good, you can compete in the Wentworth Classic Cup, the Acorn Masters trophy or even the British Open. If you choose to play in a tournament, the computer will simulate the remaining players up to the maximum of ten. Thankfully, you don't actually waste a whole lot of time watching the computer take it's shots, you simply see how well it's performed on the leaderboard at the end of each hole.





Turning to the graphical quality of Virtual Golf, I was stunned by the realism. The players are all digitised and are well proportioned with their surroundings. The animation of the players, too, is very good and is of the quality you would expect in an Arcade coin-op machine. The game also has a number of really nice touches. Selecting a club to use, for example, sees your whole bag being displayed down the side of the screen and you select one by moving the mouse. As your pointer moves past a club, it draws forward in a smooth and slick manner. What's really impressive is the speed at which the screen is drawn, from any angle - blink and you'll miss it.

The sound effects are also good, although there are surprisingly few of them. Most effects sound like they are sampled and offer great realism; you get real satisfaction from hearing the ball rattle down the hole. Your swing too has a 'whooshing' sound to it as the club cuts through the air. It is unfortunate that there is no cheering or calls of sympathy to accompany the otherwise faultless effects.

Virtual Golf is supplied with the

Fourth Dimension £34.95
Graphics 92% Sound 86% Gameplay 75% Overall 83%

Wentworth course on a separate disk and 4D promises new course disks in the future. Thankfully, the game allows you to save your match at any point so that you may return later. Other options include switching to a full screen display whilst actually playing a shot and changing the season. This can be set manually or be natural where it gains the time of year (though, thankfully, not the time of day) from the computer's internal clock.

Having paid so much attention to the actual effects in the game and its fantastic appearance, I feel that too little attention has been paid to the gameplay. Take the wind for example, its strength and direction does not alter in any way during the course of any single hole - very virtual.

One of the other problems is with putting. The game expects you to rely on examining and deciphering the small plan view map of the hole to determine whether the green is flat, where the bumps and crevices lie, how deep or high they are and so on. To aid this, you can position your player anywhere on the course to check the lie of the land. This, though useful in theory, is awkward and not particularly productive. To be fair, the game does state how far above or below the pin you are but this is of little use if you cannot get an idea of the actual angle. One major criticism is the manual. This is, at best, pretty poor. This is a major release and is likely to be bought by those with little or no knowledge of the game, but nowhere in the manual (consisting of a just ten pages of text) does it attempt to explain the terms hook, fade, slice, draw, clean, pin or any others. Not only this but it doesn't offer any advice on how to clean up your swing and gain more control. I would have thought that a game with a title such as this would greatly benefit from a virtual trainer rather than virtually no instructions.

One other bunker that hampers Virtual Golf is the fact that it is not compatible with Computer Concept's Colour Card or State Machine's range of graphics adapters.

I began my task of reviewing this game with awe and delight. It was a revelation to see such a professional entertainment product on the Archimedes. But, the more I played with it, the more negative I became, perhaps a little unfairly as it is really quite good.

Even after my rant about it's failings, this is one of the best golf games/simulations available for the Archimedes but has quite a way to go before it gets the prestigious title of "true simulation" from this player.

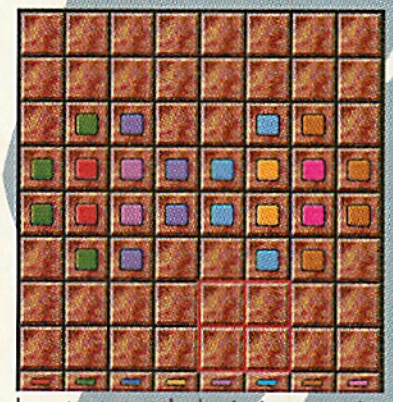
CHRIS CARLISLE

Quad

Four of a kind

Quad is a simple but rather elegant little puzzle game that requires more thought than you may assume from its appearance. A grid of squares with coloured counters arranged on it appears. Along the bottom is a row of coloured markers and your task is to arrange the counters so their colours match up with the markers along the bottom, each colour having its own column. You have a mouse controlled cursor that covers four squares; place this over a block of counters and click a button to rotate the positions of the counters, until they align with their allotted column.

This is vaguely reminiscent of one of those little sliding plastic block games you get in Christmas crackers, but with much more variety. The first of the fifty levels is very easy, just to give you an idea of what you're supposed to be doing, but by the time you get to the third or fourth puzzle things start to get tricky. You can see how to get the orange counters to the orange column, but if you do that, the blue counters are split apart and the green ones are completely the wrong side, leaving the purple.....Damn!

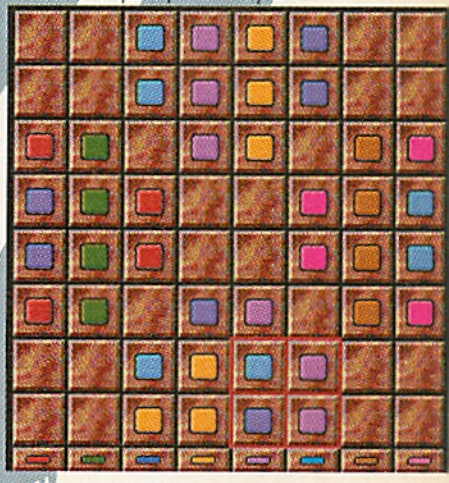


If you get confused, panic; there's a time limit and little allowance is made for hesitation.

Each of the levels has its own password, so you don't have to start at the beginning every time, but I should point out that the passwords are not exactly memorable and are rather long. Make sure you write them down accurately.

I must admit, Quad didn't exactly grab me. There have been simple puzzle games that have had such an addictive quality that they are 'unputdownable', and it may be that somebody with the right psychological peccadilloes will find this to be case with Quad, but for me it was a bit of a take it or leave game. Nicely presented, fairly challenging and, best of all, cheap, it's a game that was definitely worth releasing, unlike a lot of the low price rubbish that clutters the shelves here in the office. If puzzles are your thang, why not give Quad a try.

JIM BLUCK



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Features	●●●●●
Value	●●●●●
Overall	●●●●●

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Speaking educational software and pretty desktops are just two subjects covered this month

DayNight *APDL B127*

By the time you are 80 years old, you'll have spent approximately 20 years of your life asleep. Just think what you could accomplish if you could stay awake 24 hours a day. When night falls, nature takes its course and no matter how hard we try to stay awake we eventually fall asleep, quite literally if we've been overdoing things. Its funny how the dark is more conducive to sleep than bright light. During the winter months many people suffer from chronic fatigue but along comes the summer and they bubble over with energy.

All this leads me to the DayNight application by Robert Seago. It draws a world map in a window and indicates the areas that are in daylight or darkness. The present time is shown by default but it can be altered. To change it, you need to edit a string in a writable icon and I would prefer to alter the month, day and time with up/down arrow icons. DayNight may be of use in teaching geography as it shows the passage of daylight and darkness across our planet's surface.

Say *APDL B133*

This simple little program is from the author of KeySpeak and uses the same speech synthesizer. The program loads itself onto the menu bar and clicking on its icon brings up the Speech Handler window.

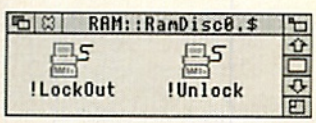
You can type a sentence into the writable icon click on the Speak icon and your computer will read aloud what you have written. The voice quality may sound monotone and artificial but you can understand what it is saying.

There are not many practical uses for this program but it may amuse a youngster for a while. It could possibly help a child develop his writing ability with some supervision, but may be able to think of other uses for a speaking computer. The limitations of the parser means that it has real difficulty pronouncing certain syllables correctly. In fact it is quite amusing when it mispronounces other people's names. A worthwhile toy to load up when you have nothing better to do.

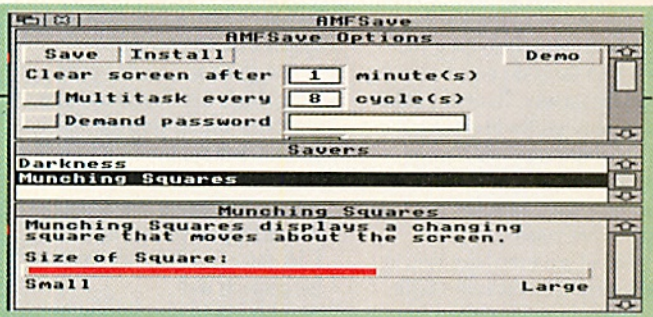
LockOut & Unlock *APDL B127*

"Matthew is a moron!". If this is the kind of message some idiot sends to you over a network you could do with a utility to lock them out. Linton Dawe has made it possible to do just that. LockOut, as the name suggests, prevents other network users from sending Notify messages across the net.

The program code is small but it works perfectly. Obviously there are times when you will want to keep in touch with other net users so Linton has provided a complementary utility imaginatively entitled, Unlock. If you believe in the old adage 'silence is golden', you'll appreciate the value of having these little trinkets among your favourite utilities.



AMFSave *APDL B133*



Although I have serious doubts about the sanity of AMF The Doomwatcher, his programming abilities are unquestionable. He has written scores of useful programs for the benefit of others. One of the best to date is AMFSave. It is one of those screen blankers that stops your monitor from being ruined as a result of displaying the desktop for hours on end.

All the controls are presented in a single window. Inside this are smaller windows with scroll bars and only a couple of menus are used in the whole program, with the result that the application is simplicity itself to use.

When first loaded, it offers just one screen blank effect. There are many others but they have to be installed before they can be used. To do this you click on the install icon. What looks like a filer window opens showing the different graphical effects available. By pointing to an effect icon and selecting menu you can install it. Now you can go back to the main window and try out the effects by clicking on the Demo icon.

The time delay before the blanking occurs can also be set and you can specify an area at the corner of the screen to move the pointer to instigate the blanking effects. One useful feature of AMFSave is a password system which only allows users who know it back to the desktop. This is similar to blankers on the Mac and PC.

The various animations which play while the screen is blanked are very attractive. My favourites are Starfield, Waterfall, Fireworks, Kinetic Balls and Twinkling Stars. The animations prevent a common cause of heart attack among novice users when they mistakenly think their monitor has packed up because it keeps going blank. I wonder how many users have taken their computers back to their dealer saying the monitor is faulty because the RISC OS 3 screen blanker is switched on. AMFSave shows you that the monitor is still working but prevents the dreaded screen burn-in. It is much more flexible than other savers and the password facility, particularly, makes it worth including in your boot up sequence. AMFSave is highly recommended.

F18 Demo *APDL B131*

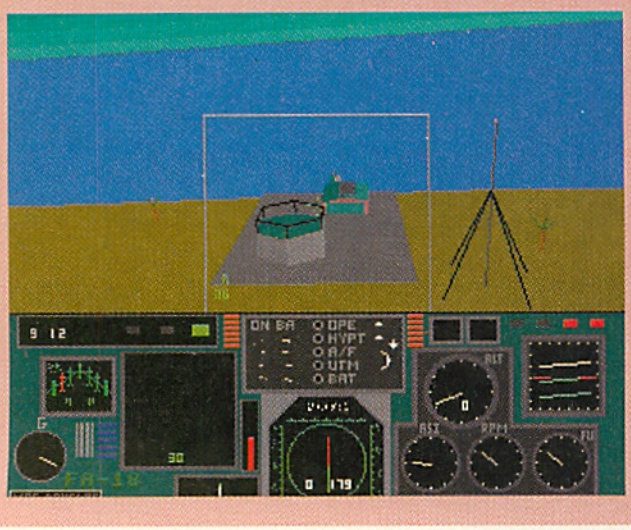
When you load up a Quantum demo you know you're in for a treat. All of its previous offerings are entertaining and great examples of programming expertise. Some of the crew have gone on to write successful commercial games. The latest release from Quantum is a fully fledged flight simulation. You pilot an F18 Hornet fighter or two other planes in six different missions. It is cheap, costing only £7.50 but it has all the features of a commercial product, including polished presentation.

The PD demo allows you to try one of the missions taken from the full game. The pretty graphics from the complete version are there, but when you try to start other missions you are politely informed how much the full game costs and where to get it from. When you have selected the demo mission a delay ensues while it loads. Then you find yourself on the runway. Well not exactly on it, rather in a hangar next to it. You taxi out, hopefully avoiding scraping your wings on the doors and then swing onto the runway. This tricky little exercise is just the beginning of a very demanding aerial combat game. Having taken to the skies, you go looking for action and boy, do you find some.

Before you even have time to do a quick reconnaissance flight, ground-to-air missiles are hot on your tail. If you manage to outwit those, enemy fighters appear out of nowhere and pose yet another problem.

I didn't last long, losing my HUD, engine and controls in quick succession. Watching the ground hurtling upwards as you fall from the sky like a god in a Greek tragedy is a sad experience. The fact that it happened to me shortly after the start of every game made it quite depressing. I think that given time to practice I could do better, but deadlines don't actually permit me to have fun (God forbid! -Ed.). To make matters worse, you have to wait for ages after each game for the same level to reload. Running it from a 2Mb RAM disk speeds things up no end.

The game was created using Simis' Flight Sim Toolkit and as a result has fast 3D graphics. The game is well designed but I would not recommend it for beginners. If you are a hardened Mig-29 or Interdictor pilot you will love the F-18 demo and definitely want the full game as well.



BreederCA *Arch Angel G55*

Cellular Automata are the brainchild of Stan Ulam, a colleague of John Von Neumann - the father of modern computing. It consists of a lattice of finite automata which are simple machines that have a finite number of states. State transition is governed by a table of values.

The state of each automaton is defined by its internal state and that of those surrounding it in the lattice. At every time step, the state of each automaton changes simultaneously. Some initial setup, states can produce automata which reproduce themselves. The famous Life game is an example of cellular automata in action and is fascinating from a scientific point of view because it is the first demonstration that machines can copy the actions of living organisms to a limited extent.

Breeder CA is a laboratory of different CAs for which you can define state tables. You can then randomly seed the automaton's states and set them off. The changes in state are displayed as different colours so that changes and interaction of the mini machines produce an animated graphical display. I would say that the maths behind the effects are more interesting than the animations as they have no real meaning. Some show certain cells eating others and it almost looks as if machines of one state fight for supremacy over others.

There are four sample files to be loaded and you can create your own if you choose. If you enjoy playing with Life games you will appreciate this offering. I personally think that it is wrong to pay too much attention to building crude life simulations while the real thing is being allowed to become extinct at the rate of 200 species a year. (Here, Here -Ed.)

WorldMap *APDL B127*

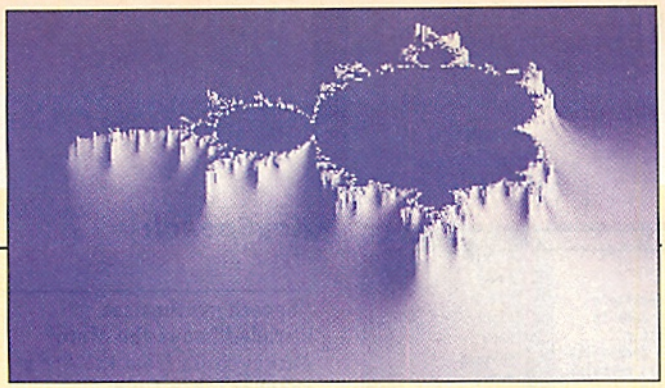
Learning about the world's continents is fun with WorldMap. Stuart Hickinbottom's program displays a detailed map in a desktop window. The application contains a huge amount of information and can generate maps that take up more than 1.5Mb, so 1Mb users should beware as the program crashes if it runs out of memory.

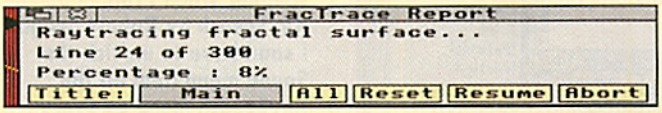
The display shows lakes, islands, coastlines and borders in different colours. These can be altered using a standard palette control similar to the one in Paint. You can select which of the seven continents you want to see simply by ticking menu items. If memory is tight, an option to decrease the amount of detail in the map outlines can be utilised. The size of the map window can be made larger or smaller and the Mercator line display can be toggled on and off. These controls allow a Geography teacher to show students the world, continent by continent. The clear colour coding makes it easy to discern countries that have coastlines and those that are landlocked.

A tool panel alongside the map display allows you to zoom in or out of the map. As you take a closer look you can see lakes and border details more accurately. The third icon on the panel looks like a globe and when it is clicked on the map is drawn.

Once a map has been created and displayed, you can begin to explore it with the zoom icons. A light grey grid is shown behind the map and the co-ordinates option causes a panel along the bottom of the window to appear. This displays the longitude and latitude of the position under the pointer, which is useful for positioning. Once you have

FracTrace *Arch Angel G55*





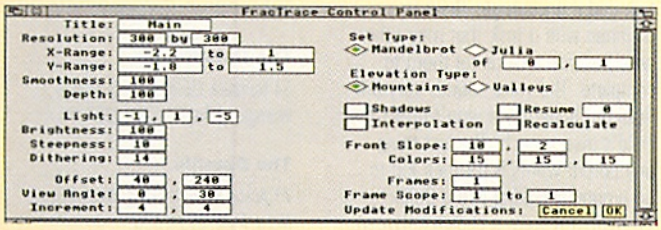
First there was the Mandelbrot beetle. Then came 3D fractals. Now we have raytraced fractal mountains! Instead of seeing a brightly coloured, recursive, spiral pattern we're treated to a view of a metallic volcano. That's the only way I can describe how the Mandelbrot beetle looks when it is rendered using Carl Declerck's FracTrace program.

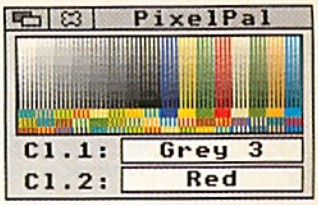
The multitasking application takes a FracTrace Script file containing the fractal maths and then creates a raytraced scene. There are 17 example FST files to start you off.

Rendering takes a long time; first it has to parse the script, turning it into a form which it can raytrace. A report window shows how much progress has been made at any given time. You can view the image at any stage during rendering but it is best to leave the windows closed as it speeds up the process. You can also kick in the turbo boosters by de-selecting the Multitask option on the main menu.

The control panel allows you to change any of the variables that govern how the fractal will appear. You can have either a mountain or valley effect. The size of the image can be reduced, saving time when you are experimenting with different fractals. The most exciting control is interpolation. This allows you to create a series of raytraced frames for animating. Each one has the view position moved slightly to produce a zoom-in or panning effect. One idea that springs to mind is to combine this with Acorn Replay movies. You could easily produce sequences where a camera seems to fly over a fractal mountain.

Scenes produced with FracTrace look stunning. There is no limit to the number of different pictures that can be created. You can easily spend a whole day just trying out one or two different fractal equations to see how they look raytraced. FracTrace is a 'must have' for all fractal devotees.

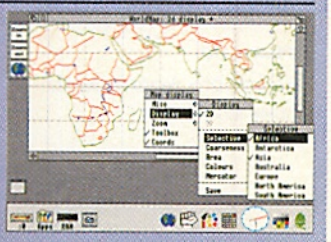




PixelPal *Arch Angel G55*

The icon for PixelPal looks clear and colourful. It depicts green paint pouring from a shiny metal paint can. It is an example of the shading that makes little icons look good in mode 12. Although it is only a 16 colour mode, you can combine them to produce a much greater number of shades. A vertical stripe pattern that has two alternating colours is used to mix them.

Clicking on the PixelPal icon displays a small window showing a colour palette. There are 256 colour shades derived from the standard desktop palette. Click on any of the palette entries and it tells you what the two colours are that make up the shade. You can then use these two colours and the dot pattern to create shapes of that colour in your own sprites. It is most useful for icon designs and those lovely picture loading panels which are common nowadays in trendy applications.



finished looking at the map, it can be saved as a Draw file. This feature alone makes the program essential for schools. It can generate very detailed maps which can then be used in many other RISC OS design applications.

WorldMap is well presented, easy to operate and is flexible enough to be used in a wide variety of ways to teach Geography. The only criticism I have is that it does not cope very well with a memory shortage. It simply reports an internal error and shuts the program down. If you have plenty of memory, I think you would be hard pushed to find a better desktop atlas.

FACTFILE

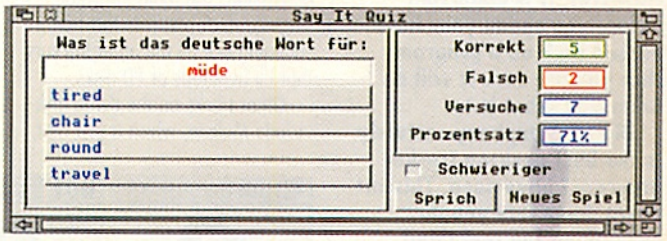
Performance:	●●●○○
Features:	●●●●●
Value:	●●●●●
Overall:	●●●●○

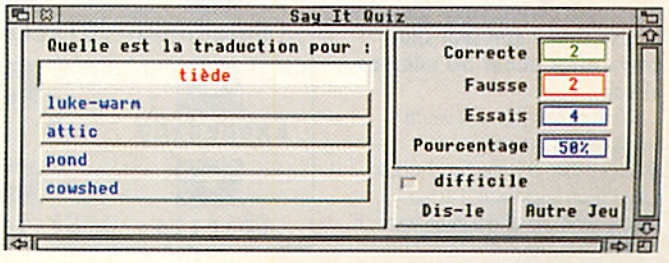
Dis-le & Sprich *Arch Angel E07 & E08*

I was decidedly impressed with Sherston Software's Talking Stories, a demo of which was supplied on July's cover disk. I consider the talking stories series to be the finest educational software yet produced - they look superb and sound great. If I, a 24 year old, enjoyed listening to the stories just think how much a child would. Sherston should be awarded with a big shiny trophy for producing such excellent software.

Incorporating real speech in a computer program can do wonders to make it more effective as a teaching tool. The Dis-le and Sprich shareware programs by Mike Smith are good examples of this. They use the sound compression and player routines devised by David Radford.

A desktop window displays a French or German word. Your Archimedes says the word with the correct accent and pronunciation. Really, the Arc is just playing a digital recording of a real human voice. The student is presented with four possible English words to match the foreign one and a guess is made by clicking on one of the choices. A score of the number of words given is stored with the number of mistakes and percentage of correct answers also being displayed. The difficulty can be increased by switching off the display of the foreign word. This ensures that the student is guessing the correct English word by listening to how the foreign word is pronounced. These two applications are shining examples of shareware at its best. I urge any language teacher or student to get these disks. If you register (a bargain at only £5.00) you can also get other language versions including Chinese, Spanish, Norwegian and Finnish. I hope to see more software of this calibre appearing in the future. When it does, I'll bring you full details.





Backdrops *APDL B133*

There is no help file provided by Backdrops so I don't know the author's name. This is a shame as I would like to congratulate him or her for writing a top-notch utility. It is only for RISC OS3 users as it uses the pinboard's Make backdrop facility.

A single window appears when the program is loaded. Nothing appears on the menu bar and there are no menus. You simply scroll the long list of pattern names and click on one to load it into the backdrop. There are over 40 different patterns to choose from. More can be added simply by dropping a sprite into a directory within the application. I found that both Tartan and Wallpaper produced attractive backdrops. At the top of the window are three radio buttons. They allow you to have the background sprite centred, scaled to fit or tiled.

When you get bored with the look of the desktop, simply click on another sprite name to change it. I don't quite know why this little program is so appealing, perhaps it's the simplicity or the pleasing effect it has. One thing is certain, you'll be glad you added it to your utility collection.

KeySpeach *APDL B127*

"Speech synthesizer installed" says the Metal Mickey voice from the Arc's speaker when I run KeySpeach by Robert Seago. I soon have to un-tick the Sound menu item on the KeySpeach menu as every time I hit a key to write this text the computer speaks the letter. It even calls out "Deeleet" and "Reeturn" when I hit these keys!

Although it would drive most adults crazy after just a short while, it could help people with a visual disability or children learning the alphabet. It also aids in familiarisation with the QWERTY keyboard. Youngsters love to hear machines talk and it encourages them to continue with a task that may otherwise become tedious for them to complete. The voice sounds very artificial but hopefully it won't affect the child's own speech. The last thing any parent wants is for their kid to go around speaking like a Dalek. (Though if it were a choice between a wheeled death machine and a foul mouthed five year old, I know which I'd choose -Ed.)

Digital Symphony Demo *Arch Angel MD3*

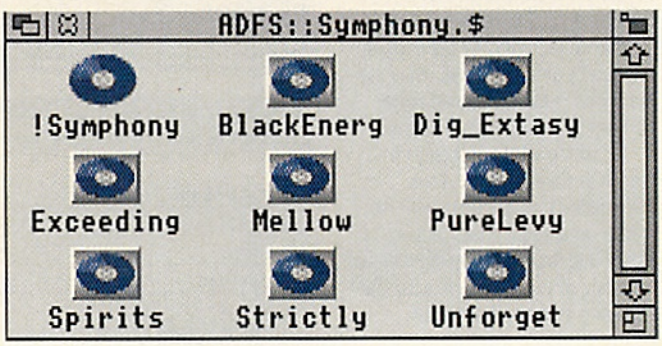
As Digital Symphony is a commercial product and, as this is a PD column, I'll not say too much about its demo. However, it is important before you spend your hard earned cash on a program that you are sure it will do what you want it to.

Digital Symphony certainly is the best desktop tracker program I have seen. This cut down demo lets you do everything the real thing does apart from save files. It is also timed and will shut down after about 30 minutes of use.

What makes this disk worth mentioning is the song, Unforgettable. It is the first Tracker song I have heard which actually makes good use of a human voice. It is limited because the digitised singing is not compressed and therefore has to be short. The piece is very melodious with some subtle percussion. The main attraction is the singing which prevents this from sounding like all the other trackers that fill hundreds of PD disks.

Other tracks on the demo disk include Mellow, which is just that, you can almost hear Sade's lilting voice wafting seductively through the speakers. PureLevy is a rave track which quickly becomes boring (don't they all? -Ed.). Spirits reminded me of Clannad's music with its pan pipes. Not the world's best collection of songs but it does contain some good tunes.

MATTHEW FIFIELD



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Arch Angel PUBLIC DOMAIN
P.O. Box 41, Exeter, EX4 3EN
Telephone 0392 422759

Moribund Hedgehog
3 Rodmell Close, Bromley Cross, Bolton, BL7 9DT

Five Star Marketing
18 Woburn Close, Bushey, Herts. WD2 3XA

Other PUBLIC DOMAIN libraries

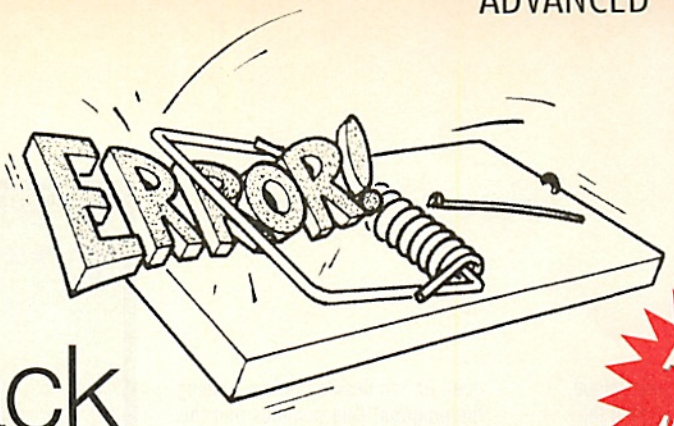
Arcaynia
PO Box 1927, Sutton Coldfield, B74 3QZ

The DataStream
34 Norbreck Close, Great Sankey, Warrington, Cheshire, WA5 2SX

The Datafile
71 Anson Road, Locking, Weston-Super-Mare, Avon, BS24 7DQ

Skyfall
PO Box 2220, Birmingham, B43 5RZ

Planet PD
37 Manor Drive, Berrylands, Surbition, Surrey, KT5 8NF



Error Throwback for BASIC

A RISC OS3 ONLY APPLICATION

Joe Taylor begins a new series on advanced programming with a useful error trapping program

The term 'error throwback' was first used, in the Archimedes context, to mean error detection for translators (compilers/assemblers). It allows the translator to signal to an editor when an error in the source code has been detected (during compilation for example). Usually what happens is that the editor opens a window containing the name of the file, together with a list of the errors found.

This window is referred to as the editor's Throwback window since clicking on an error in this window causes an editor window, containing the appropriate file, to be opened with the cursor placed at the offending error line, ready for amendment - this is error throwback.

To implement error throwback, you need the Acorn DDEUtils module (DDE means Desktop Development Environment) which enables errors to be signalled to an editor. You also need an editor which can make use of this information (i.e. can register for throwback). Examples of such editors are SrcEdit (supplied with Acorn's DDE), DeskEdit, StrongEd and Zap (see last month's article on editors). Edit, as supplied in the ROM based Apps directory, does not implement error throwback.

A growing number of programmers are now writing and editing their BASIC programs in the multitasking environment of the desktop, which allows programs to be written without (ugly) line numbers. For such programmers, a system of error throwback for BASIC programs would be very useful, but I have seen only one editor - DBEdit - which has implemented this for BASIC programs. DBEDit's error throwback is not based on the DDEUtils module but on a wimp messaging system particular to DBEdit and capable of wider application than just error throwback. I set myself the task implementing an error throwback system for BASIC programs which used the DDEUtils module and would work with those editors which implement throwback, which became the application Throwback on this month's cover disk. The DDEUtils module is supplied with Acorn's Desktop Development Environment but can also be obtained for a few pounds from a variety of other sources.

For many programmers, the RISC OS3 version of Edit will be the desktop BASIC editor of choice and I also decided to try to implement error throwback for this editor. Although the DDEUtils module cannot be used, Edit has keypress shortcuts (e.g. pressing function key F5 opens the GOTO line number dialogue box) which enable error throwback to be 'fudged' via *FX calls, exactly as for the old BBC micro. Since the key presses in DeskEdit and StrongEd are by-and-large the same as Edit, this crude method also works for these editors, in the absence of the DDEUtils module. Throwback has this feature built in. Proper error throwback is used if there is an editor up and running which is registered for throwback, otherwise the key press method is used.

Running Throwback

Simply double-click on the Throwback application. Nothing will appear to have happened, but if you inspect the Resources:$.Resources.Edit directory you will see that a BASIC program, Throwback, and an application, Throw, have been added to this directory. You can now put away the disk containing the Throwback application since it is no longer required. It is the program Throwback, in the ROM based Edit directory, which is run whenever you wish to perform error throwback. In fact, since these programs take up only 7K, it is a good idea to run the Throwback program from a boot file at start-up in the usual way.

To use throwback, you must provide an ON ERROR statement in

your BASIC program which chains the Throwback program in the Edit directory, e.g.

```
ON ERROR CHAIN
"Edit:Throwback"
```

The use of the ON ERROR statement was explained in Graham Stanley's article in the June 1993 edition of Archimedes World; see also pages 167, 261 of the BBC BASIC Guide.

When an error occurs in the BASIC program, the commands immediately following the last ON ERROR statement are obeyed. (In our case the program Edit:Throwback is CHAINed). The use of an ON ERROR statement is dangerous since any errors made after the ON ERROR command will throw the program into an infinite loop from which the computer will have to be reset, thus losing data, etc.. A better practice is to have a procedure which handles errors, the first line of which turns off the error handler. Consider, for example, the program SampleProg from the Throwback Examples directory on the monthly disk, e.g.

```
ON ERROR PROCError

REM > Your Program lines
here
Print "Hello" : REM
!!!!!!!!!!!!!Deliberate
mistake
END
:
DEF PROCError
ON ERROR OFF
CHAIN "Edit:Throwback"
END
```

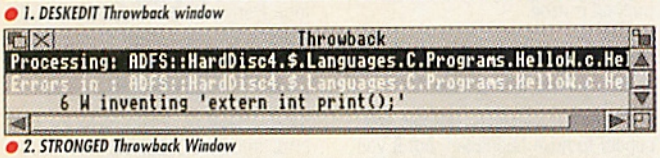
If RISC OS3 Edit is your default editor, then double-clicking this program will produce the error throwback box shown in Figure 4. Clicking on the button marked throwback causes Edit to open a window with the offending line marked as in Figure 5. If the auto button in the throwback window is selected, the editor window will be automatically opened at the same time as the throwback window appears. This is left as a matter of personal choice.

The editors StrongEd and DeskEdit behave in a broadly similar fashion, although the highlighting doesn't work in the case of StrongEd. If you register these applications for throwback (i.e. if you possess a copy of DDEUtils) then the throwback box belonging to these editors is opened instead of the box shown in Figure 4. Clicking on these boxes performs throwback. This is perfect in the case of StrongEd but for DeskEdit, the file is not detokenised. This is corrected by having a DeskEdit window containing the program open on the desktop before running the program. One assumes that this is because the authors of DeskEdit did not anticipate throwback being used for BASIC files. The editor Zap, if it is registered for throwback, also works well.

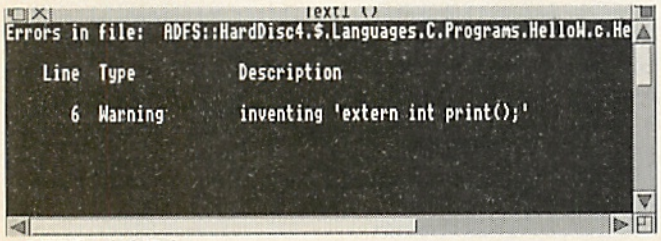
How BASIC throwback works

To organise throwback for BASIC programs we need three pieces of information - the line on which the error occurs, the full path-name of the file containing the error and the nature of the error. The standard BASIC error handler goes some way towards providing this information. When an error occurs, the variable, REPORT$, contains information about the nature of the error and the variable ERL contains the BASIC line number of the line containing the error. When another program is CHAINed (e.g. Edit:Throwback) the values of these variables are unaltered. Consider the program Edit:Throwback called by the ON ERROR command:

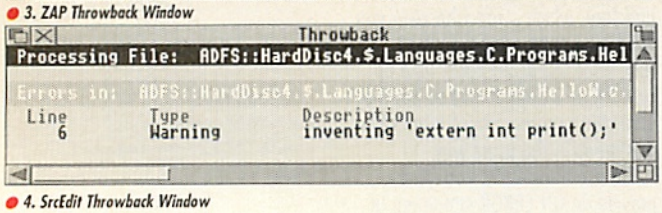
1. DESKEDIT Throwback window



2. STRONGED Throwback Window



3. ZAP Throwback Window



4. SrcEdit Throwback Window

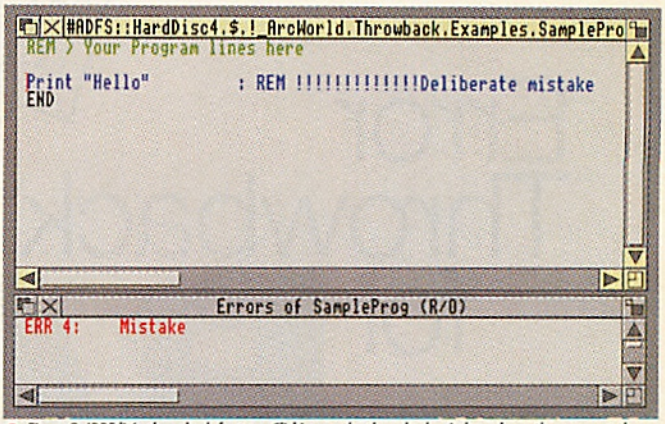


Figure 2. !DBEdit's throwback feature. Clicking on the throwback window places the cursor at the offending line

```
REM >Throwback
*Set Throwback$File
<Basic$File>
OSCLI("Set Throwback$Report
"+REPORT$)
OSCLI("Set Throwback$ERL
"+STR$ERL)
*Run Edit:!Throw
END
```

What this does is read the relevant information and pass it on to the application Throw, by using the system variables, Throwback$File, Throwback$Report and Throwback$ERL.

The line number is the first thing which gives us problems. ERL is not necessarily the actual line number (from the editor's point of view) of the offending line. In the normal situation (e.g. following a RENUMBER command at the BASIC command line) the BASIC line numbers start at 10 and are incremented by 10. Thus, the physical line number is obtained by dividing ERL by 10. However, different editors have different defaults when you are programming without line numbers. Edit saves in the normal fashion, in increments of 10, whereas as StrongEd saves in increments of one (i.e. ERL corresponds to the exact line number). The throwback window (Figure 4) allows for either of these defaults. If the normal radio button is selected then ERL is divided by 10 or, if logical is selected, ERL is unaltered. (This can lead to some peculiar effects. For example, if a program is saved in line number increments of one and normal is selected for throwback, an error in line 11 will be shown as an error in line 1.1. To correct this simply select the logical radio button).

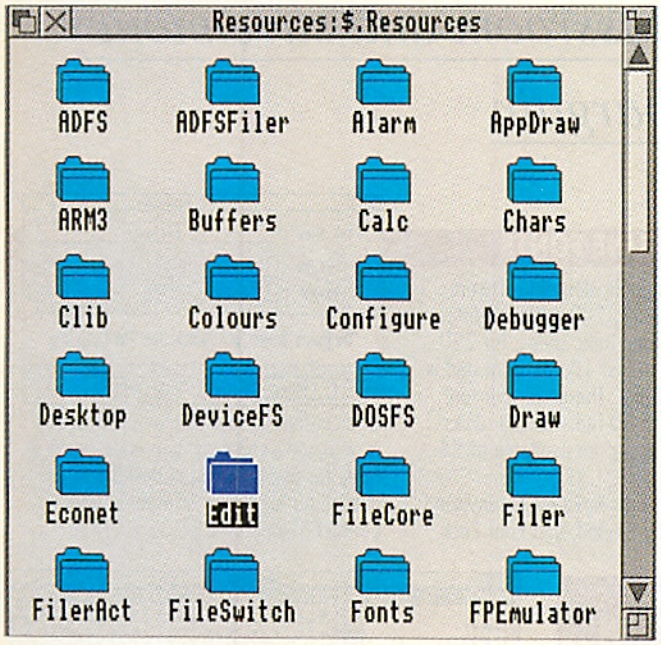
If you always program without using line numbers and you do not alter the default setting for your editor, then one or other of the above settings works. However programs may be saved with line numbers varying by irregular amounts. For BASIC throwback to work, such a program must be renumbered either in the standard increments of 10 or increments of 1. This is the purpose of the redo button in the throwback window. Clicking on this will use your editor to resave the program with lines numbered according to it's default setting (assuming line numbers are switched off). As long as your program does not reference line numbers (e.g. in GOTO statements) and the default setting of your editor is normal or logical as above, then this method will work. Otherwise RENUMBER your program at the BASIC command line. Of course, all this will be unnecessary if you always program without reference to line numbers.

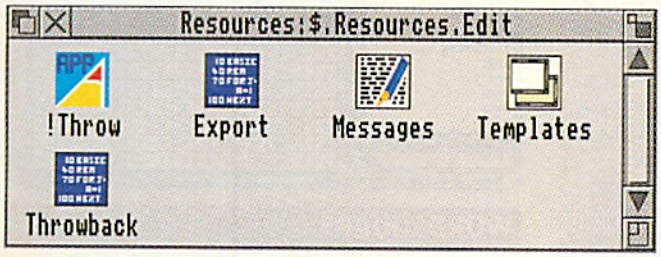
Two system variables

The throwback process is, in effect, controlled by two system variables; BASIC$Options and BASIC$File. Whether the line numbering is regarded as normal or logical is determined by the value of BASIC$Options. If this variable contains the letter "l", the numbering is regarded as logical and the value of ERL is taken to be the actual line number of the offending line. Otherwise, ERL is divided by 10 in the throwback process. Also, if BASIC$Options contains the letter "a", the auto facility is not implemented. If the key press method of throwback is used, you need not worry about BASIC$Options, since its value is altered by the buttons in the throwback window. Otherwise, it must be set directly (e.g. if you use the DDEUtils method of throwback), from the command line, etc., using the *Set command. E.g.

```
*Set BASIC$Options la
```

Figure 3. Clicking on !Throwback adds the application !Throw and the BASIC program "Throwback" to the Edit directory in the ROM based Apps





The variable BASIC$File must contain the full path name of the program file containing the error. This is used by the throwback process to locate the appropriate file to be edited. For simple programs (e.g. SampleProg on the disk) which are double clicked in a Filer window there is no problem. The so-called Run Alias for BASIC files was altered by Throwback using the system command:

```
Set Alias$@RunType_FFB Set
BasicSFile %%0 |m Basic -quit
|"%%0|" %%*1
```

The default value of this variable has been altered by adding a command to set the value of BASIC$File to the path name of the program which is double clicked. For ordinary programs you can forget this since it is taken care of automatically. The problem arises if the mistake takes place in a library or a multi-tasking application.

Applications run in a multi-tasking environment. This means that, although the value of Basic$File was set correctly when the application's RunImage program was run, this value may have subsequently been changed by the running of other applications or programs. Thus we need to save this value when the application is first run. Assuming that the application has the standard Run file (of type Obey) and BASIC RunImage file, two steps are required. E.g., for an application called App:

a) Add a line to the applications Run file such as:

```
*Set App$BasicFile
<Obey$Dir>.!RunImage
```

This stores the path name of the RunImage file in the variable App$BasicFile. Application writers will already be familiar with this technique.

b) In the PROCError procedure put this value into BASIC$File before CHAINing the Edit:Throwback program. E.g.

```
DEF PROCError
ON ERROR OFF
*Set Basic$File
<App$BasicFile>
"Edit:Throwback"
ENDPROC
```

The program SampleApp (although not a full working application) gives an example of how this works.

Error reporting for libraries in RISC OS3 has been improved so that the error message states the line and library where the error occurs. Our throwback process makes use of this and all you need do is make sure that the first line of your library is the full path name of your library procedure. E.g.

```
REM > ADFS::HardDisc4.$.Fred
```

This is recommended Acorn procedure in any case. Even better is to use so-called pseudo filing systems, which allow you to move your library around without having to write the absolute address; see the example SampleLib on the monthly disk.

Conclusions

I have used this program successfully on a number of programs and projects. Once you get used to it, it is quite simple to use, but I will be interested to hear of any difficulties readers may encounter. I look forward to RISC OS4 with error trapping and throwback built in (why not, Acorn?).

Much of the discussion in this article has been about system variables; a topic, in my view, not very well described in the Acorn manuals. Next month I will look in more detail at the use of system variables and other related topics.

JOE TAYLOR

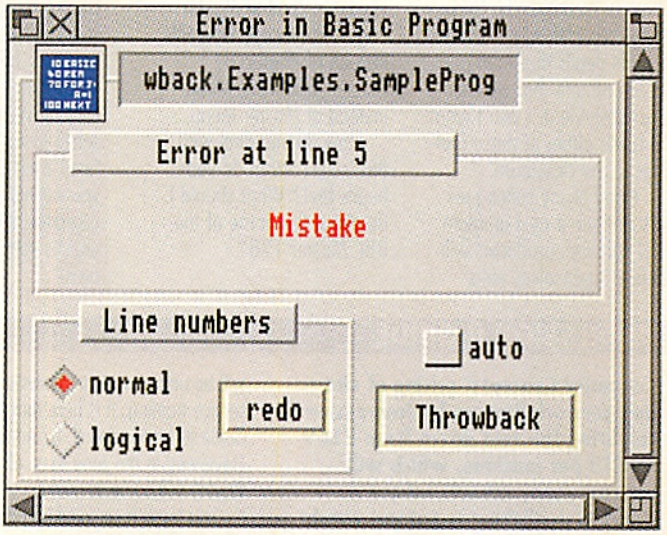


Figure 4. Throwback window for BASIC programs with the offending line highlighted

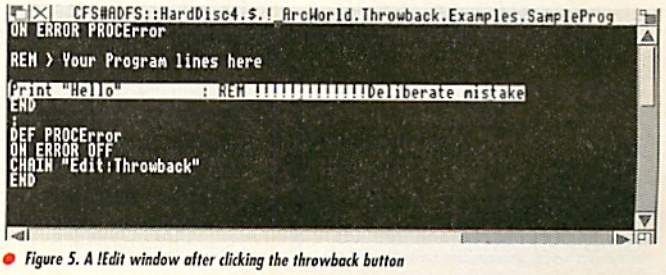


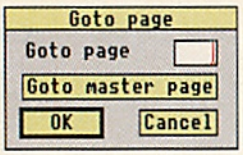
Figure 5. A !Edit window after clicking the throwback button

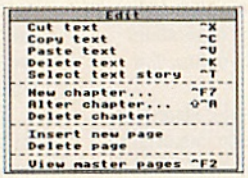
CLASSROOM '93

More ideas to help in the classroom and save money into the bargain

PROBLEMS WITH WORDS

I am finding it increasingly difficult to use the word "master" in certain situations in the classroom. The connotations of white male supremacy may not produce the intended meaning and can interfere with pupils' learning and lead to disruption in the classroom.



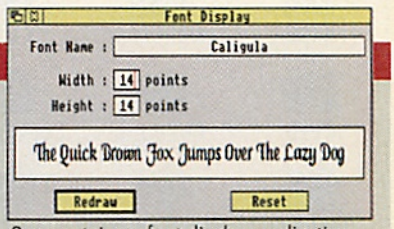


Terms like, Master Pages, Photocopy Masters and Master Menu may provide a painful reminder of the master-slave relationship to Afro-Carribean pupils. These terms can also suggest to female pupils that men are in control and that women are subservient. I don't want to cause either of these feelings in my classroom.

Many of my colleagues will not see it as a problem and software producers will defend themselves with dictionary definitions and the need for conciseness in menus, but I prefer to use alternative descriptions. I use Page Templates or Page Layout instead of Master Pages, Photocopy Originals instead of Photocopy Masters and Main Menu instead of Master Menu.

How do you deal with this issue? What do your pupils feel? What should I do about the name of the BBC Master 128?

MORE OUTLINE FONTS

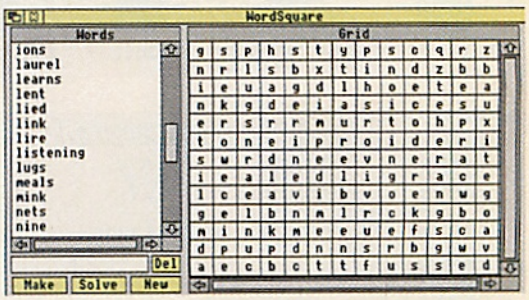


Skyfall PD, the public domain software distributor, is selling 200 outline fonts, each with bold and italic styles, for £20. This works out at just 10p per font and is obviously a bargain. There are four font packs, each with 50 fonts on four disks and individual packs are available at £6 each.

Most of the fonts have been converted and corrected by Skyfall, and Font Pack One contains a font display application. Now schools can provide a wide range of fonts for pupils to use in desktop publishing, at a very affordable price. Contact Skyfall on 021 358 7078.

SOFTWARE REGISTRATION

New and improved versions of Serenade from Clares Micro Supplies, Eureka from Longman Logotron and the Turbo drivers from Computer Concepts, have been supplied free to registered users. If you have bought software but have not registered it with the publisher, you will not benefit from upgrades. It makes sense to register software that you own.



WORDSQUARE

Wordsquares, sometimes called wordsearches, provide an ideal way to end a topic in almost all subject areas. These letter square puzzles, where words are hidden in a variety of orientations, can be used to present a vocabulary list which covers key points that need to be remembered.

They offer alternatives to traditional teaching methods and can interest the most unmotivated student. I like to take the words from a Cloze procedure and hide them in a wordsquare to present a double puzzle to my classes.

There was a wordsquare application on the April 1993 Archimedes World cover disk which allowed wordsquares to be created and saved in a variety of formats.

David Pilling has recently published a Wordsquare application that comes with two dictionaries, the first containing around 70,000 words and the second some 140,000 words. The dictionaries are compatible with Ovation, Spell and CrossStar. Wordsquares can be created automatically from the chosen dictionary or from a given word list. Word lists can be imported and exported as text files and the grid can be saved as a neat draw file. Existing wordsquares can be loaded or entered manually and solved at the click of a button.

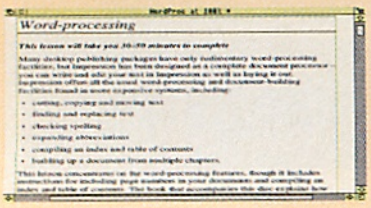
Costing just £5.95, this useful application should be in all schools. Contact David Pilling at PO Box 22, Thornton Cleveleys, Blackpool FY5 1LR.

DAVID WATKINS

IMPRESSION II GUIDE

Computer Concepts' pricing of site and network licences for Impression II can bring the cost down from £169 to £33 per machine, which will interest many schools where desktop publishing is not yet established across the curriculum.

As more teachers demand access to desktop publishing facilities, IT Co-Ordinators will be under increasing pressure to provide in-service training. It is here that the Dabhand Guide to Impression II, by Anne Rooney, (reviewed in the June issue of Archimedes World) will come in useful.



This book is an ideal introduction for those teachers who want to use Impression II but find Instruction Manuals heavy going. It readily forms the basis of a self-help, individualised learning course and is accompanied by a support disk containing tutorial lessons and example files. The five tutorial lessons on disk cover effects, frames, page layout, styles and word-processing.

This book should be in the staff library of all schools where Impression II is used. Contact Dabs Press on 0772 623000.

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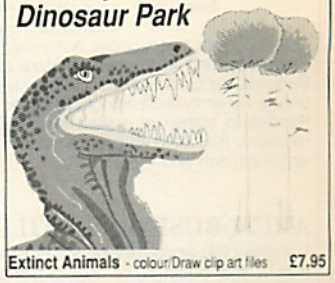

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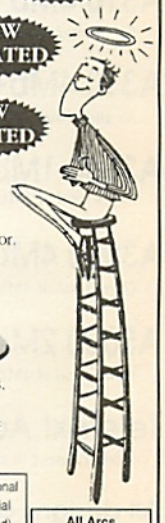

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Letters

The transfer market

I read with great interest your article Small is Beautiful in a recent edition of Archimedes World.

I also have a Z88 which was my introduction to computers. The machine has proved infuriating through a mixture of finger trouble, a mechanical fault with the keyboard membrane and what can be best termed as the Z88's many quirks. At one time I firmly believed the Z88 to have a mind of its own, so much so that on several occasions it has narrowly escaped being hurled out of the window or into the nearest trash can! However I persevered and now I'm very fond of the Z88.

The only problem I have never experienced is transferring data from the Z88 to my A3000 RISC OS2 and latterly my A4000 running under RISC OS3.1. After picking the brains of a colleague in BBC education I purchased Pipedream 3, a serial port upgrade for the A3000 and from Cambridge Computers C Link 2 for the Z88. The baud rate on both machines is set to 9600, the default setting. Using Pipedream 4's Z88 file to transfer application I experience no difficulties in linking both machines.

Data transfer may be slow but is always accurate. The need for the serial port upgrade for the A3000 was only discovered after many painful hours and telephone calls. The various links would not work without one. This was another of those things about computers which are quite important but which no one tells you about. The relevant information lay hidden in one line in the thick A3000 instruction manual. Why oh why, Mr Acorn, did the A3000 not come with a working serial port?

Z88 file transfer to Pipedream 4 on the A4000 seems problem free. Once my Z88 files are safely in the A4000 I can load directly into Pipedream 4 or into either Colton's Wordz or Computer Concept's Impression. I lose many effects, but that is no real hardship. I find it very useful to be able to interchange my spreadsheets and to key strike compatibility on each machine.

RISC OS3.1 demands that you turn off the interactive file copying function. Now I have upgraded the Z88 operating system to version 4, the machine seems far more stable and less prone to unexplained crashes. You get the upgrade ROM for about £25 from the Z88 Users Club. Power consumption has always been a problem with my Z88, especially since I installed a 1Mb ram card. On location, wherever possible, I use a large external home made battery pack, but at home leave the Z88 running on the mains power via the transformer. I have a hunch that many unexplained soft resets, lock ups and corrupted data were by and large a result of low volts. If you put the Z88 away for a week with the memory almost full and if you are using internal batteries, you are likely to find on your return that the machine has shut down and your data has flown to the gods!

One new problem I have encountered since the Z88 upgrade is that plain text files written on the A4000 for subsequent transfer into the Z88 diary format, e.g. % & date for each new day, will not load sequentially into the diary when transferred to the Z88. I find the complete file loads into the first active diary day. To get the diary to function correctly, I first have to resave in plain text on the Z88.

Ranger Link for IBM clones is said to be much improved over PC2 Link from Cambridge. The Z88 User Club and Vic Gerhardi of Rakewell Ltd are most helpful.

Derek Banks
Camberley, Surrey

Has anyone else got any comments on the Z88 and Archimedes link applications?

Praise Be!

Can I take this opportunity to mention a newcomer to the Archimedes scene, namely a small company called C.U. Electronics, which produces and markets a wide range of hard disks for the Archie series.

Their prices are nothing short of staggering and have dropped dramatically in recent months. I bought an 84Mb internal unit for my A3000 and it only cost £299 + VAT. A similar size hard disk purchased from other sources would cost well over £600.

The drive used is made by Maxtor and is mounted onto the interface PCB and connected to it by a short wiring loom. There is an on-board ROM, which I assume contains the IDE filing system and CU has taken the trouble to socket this chip, allowing it to be easily replaced in future if the software is updated.

Fitting the unit is simplicity itself once the lid of the computer is removed. The back plate is removed to allow you to get your fingers in and the board simply locates into the strip sockets on the A3000 main board. A small spacer underneath the drive rests on the printer socket and the whole thing is held firm when the lid is replaced.

When the computer is switched on, the IDE:4 icon bar and the drive is ready for use.

The installation instructions included are a little skimpy and it took me a little while to get it to auto-boot with RISC OS3, although the drive itself worked straight away. I think it would be wise of CU to include full configuration instructions so that the buyer doesn't have to thumb through all the manuals (like I did).
For users of RISC OS3 the installation sequence is as follows:

1. Press Ctrl-Reset to re-start your computer.
2. Set up the desktop the way you would like at switch-on. For instance load a printer driver, word processor, etc., or open the root directory of the hard disk.
3. Save the file in the root directory of the hard disc as !Boot.
4. Press F12 and type

```
*Con.Boot
*Con.Drive 4
*Con.FileSystem IDEFS
*OPT 4 2
```

5. Press Return to return to the desktop.

Now, whenever the computer is switched on or a hard break is performed, your Boot sequence will be run.

I am very happy with my new drive although I had to wait quite a time for it. I placed my order on the 16th December 1992 and didn't receive it until 22nd January 1993. I had to make a few phone calls to ask about the delay, which I was told had been caused by a third party that CU uses to make the wiring looms. I suppose because of the price poor CU was snowed under with orders as well which could have held things up.

All in all, the product is very well made and easy to install and I am pleased to see a company taking the initiative to move into the hard disk market where prices have been deliberately kept high by Acorn who seem to try to keep the technology a black art.

By the way, CU, have you thought about using IDC connectors for the wiring loom? They are much easier and quicker to use.

John Scott Paterson
Newcastle upon Tyne

Service charge

I would be most grateful if you could publish this letter through your magazine to inform others of the dealing I have had with IFEL, based in Saltash, Cornwall.

During the time I have owned my A3000 (over some years) I have dealt with ITEL in regard to upgrades, buying items, technical help and just general information. To all these, ITEL has responded in a very professional, quick and courteous manner, whether it was morning, noon or night, weekday or weekend.

I cannot sing the praises of this firm enough, in an age where this kind of service is getting so hard to find. So, please, let others know about IFEL, as I feel that this kind of service should not go unrewarded.

D. Lewis
Plymouth

If you've any praise or damnation for companies serving the Acorn market, we'd like to hear them. Please send your letters to Read/Write, Archimedes World, Argus House, Boundary Way, Hemel Hempstead HP2 7ST.

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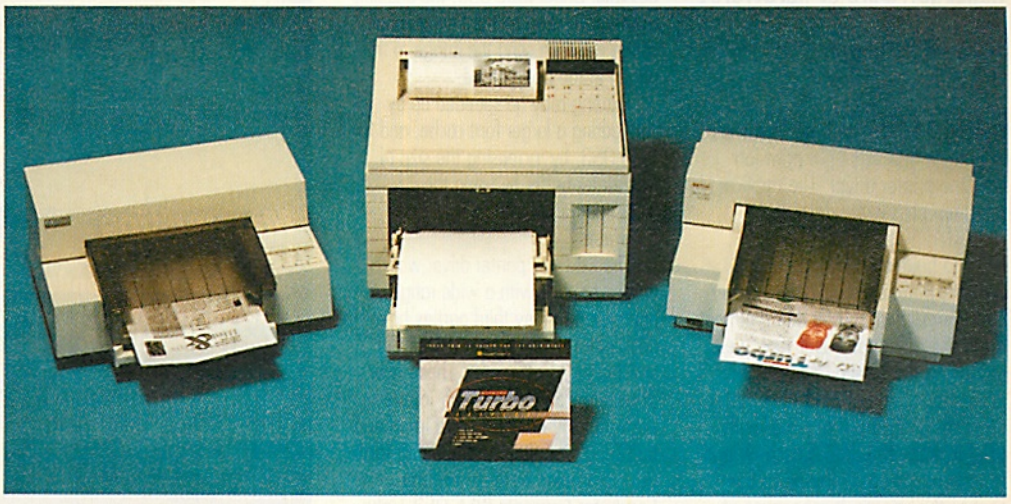
Acorn answers

Chris Honey delves into our technical postbag

Faster or not?

I have noticed that during a copy action under RISC OS3, pressing Menu over the status window offers a Faster option. Does that actually increase the speed of the copy process or simply imply this as it switches off the window update.

Terry Langwith
Liverpool



The RISC OS3 background filer has several options to control and give information on the progress of actions such as copying, finding, deleting and moving files.

When you click Menu over a filer directory display, you will get the Filer menu. One of the entries is the Options menu. The Verbose option is normally on and results in a dialogue box being displayed during the operation. The dialogue box shows the name of the current file being worked on, how many bytes there are to go and so on. The verbose option also gives a high priority to keeping the display of the filer windows up to date by immediately showing newly created files in the filer windows.

Keeping the filer windows and dialogue box up-to-date takes additional time over the actual operation being performed so, cleverly, RISC OS3 gives you the option of speeding up the process. If you click Menu over a Filer dialogue box (not a directory display) you get the additional option Faster. Choosing this option results in less information being displayed and less frequent update of the filer directory displays, resulting in faster operation.

The Faster option does not actually speed-up the physical transfer of data between memory, but reduces the time between the chunks of data being copied, resulting in quicker operation. This is particularly noticeable when using floppy disks, or if your filing system has an above average overhead for accessing small chunks of data.

Interactive file copying can be turned off completely by an option in the Windows section of the Configure application. However, although this may save some time, turning off interactive file copying is rather like stacking shelves in the dark: I prefer to have a light so you can see what's going on!

System Switch

I have recently upgraded my A440/1 to RISC OS3 and have found that some of my public domain software and even a few commercial applications fail to work. Has anyone manufactured some kind of switch unit to enable both RISC OS2 and RISC OS3 to be installed simultaneously or am I stuck with non-functioning software?

Lucy Walters
Alton, Hampshire

This is an interesting question as it is technically possible to design a carrier board to install both versions of RISC OS. Once installed, you would decide whether to use version 2 or 3 when the machine was turned on, as switching betweem them with the machine on would be impossible. I have not heard of any existing products like this, and the chance of one appearing is probably zero. The advantages of RISC OS3 far outweigh the few problems caused with old RISC OS2 software. Incidentally there should be virtually no commercial applications around that have problems with RISC OS3, as developers have been given very good support by Acorn, to ensure their products worked when RISC OS3 emerged. Perhaps it's time to check you have the latest

Background Printing

RISC OS3 is a very nice multi-tasking operating system but seems to have one failing - it can't handle printing in the background whilst I work on other things; or can it? A friend says that he has seen some information about background printing in an Acorn magazine, but after having scanned through boxes of recent copies, I can't find any reference. Is background printing possible on my A5000? Do I need any additional software or hardware?

James Billingham
Oxford

When a RISC OS application wishes to print, it first sets up a print job with the printer driver. The application then passes the data as requested by the printer driver in order to build-up an image at the correct resolution. Applications carry out a print operation by doing almost the same operations as if they were redrawing the screen. When a print job is started, the printer driver intercepts the software that is normally used to draw the data on screen and instead builds up an image to be sent to the printer. It is because of this interception that it becomes inefficient to print while the rest of the desktop is being used, as, for example, the same sprite plotting routines may be needed. There is an overhead for swapping in and out of the print job to perform multi-tasking and it is also difficult to arrange printing to give a useful degree of multi-tasking, since the size and complexity of the image to be printed will affect the amount of time left for the rest of the desktop.

Virtually every application that I have used attempts to render the image to be sent to the printer as fast as it can so as to give control back to the rest of the desktop as soon as possible. Under RISC OS3, the queuing mechanism used by the Printers application will then send the image to the printer in the background.

Printing may be speeded up by configuring a larger font cache, and for RISC OS3, by increasing the size of the printer buffer by using the *Configure PrinterBufferSize command.

The RISC OS printer driver was written to cope with a wide range of printers and many third parties have developed faster printer drivers for specific types of printer. These new drivers not only render the image more quickly but also have improved buffering, spooling and queuing facilities. Examples of these are the Computer Concepts RISC OS3 Turbo Drivers and the PROdrivers from Ace Computing.

Printer control

Name	Type	Connection	Status
NEC P6+	NEC P6 Plus Colour	Parallel	Active
Linotype	Linotronic 200	Parallel	Inactive
ColJet2000	Integrex Colourjet 2000	Parallel	Inactive
EX-800	Epson EX-800 Colour	Parallel	Inactive
LC24-200	Star LC24-200 Colour	Parallel	Inactive

Mac writing

I want to be able to write data directly to Macintosh disks and was wondering whether a utility to do this existed. If not, can you suggest a simple way of transferring data?

Malcolm Impass
Forest Hill, South London

The newer Macintosh machines can read and write PC format disks, just like the Archimedes, so this may be an easy solution to the problem. However if the Mac in question uses the older variable speed drives, I suggest two solutions. You can employ the services of a disk conversion company that will copy your data onto the required format, or you can use a serial link with the appropriate software at both ends.

Driving a hard bargain

The original hard drive in my A440 finally gave up the ghost recently after playing up for the last month or so of its life. The only problem now is that I am told that these drives are difficult to find and cost a small fortune. Would I be better off buying a new IDE hard card for the machine or perhaps a SCSI card and drive rather than replace my original with a similar model?

Jules Singleton
Skipton, North Yorkshire

The original hard drives used in the Archimedes were to the ST506 standard and they needed a fairly complex controller card to work with the Archimedes. Technology moves fast, especially fast in the hard disk arena. Led mainly by demand on the PC compatibles, hard disk manufacturers soon integrated the controller onto the drive itself. The benefits were obvious, reduced size and a simpler interface for the computer. These new drives are in fact IDE drives (for Integrated Drive Electronics) and have almost squeezed the older ST506 drives out of the marketplace.

You would indeed be better off buying a new IDE drive with a simple interface card as you will benefit from a more reliable drive technology and better overall performance. For a higher initial outlay you could also go for a SCSI based approach.

HD pricing

I have recently upgraded my A3000 to an A3010 and have discovered that ridiculous prices that are charged for High Density disks. As far as I can see, the only difference between HD and DD disks is the little square hole in the right corner, opposite the write protect tab. In an experiment, I cut a hole in the correct position on a blank disk and then formatted it to 1.6Mb without any problems. Are we being charged too much for this extra hole?

Chris Evans
Hoveton, Norfolk

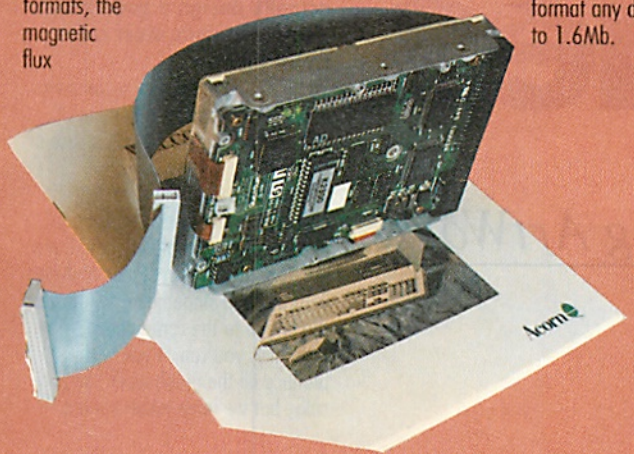
Definitely not! Floppy disks are graded according to the capacity of the magnetic material used on the disk. A far higher grade is needed for high density compared with double density types. Whilst this is probably obvious, the main reason is that high density drives record the information differently in a high density format compared to the double density format. For high density formats, the magnetic flux changes are closer together and are recorded in a different direction and this demands a higher grade of disk.

A double density disk formatted to high density will give a reduction in signal when the data is read. A freshly formatted disk may well read OK, but over time and temperature the signal will worsen and result in loss of data.

The magnetic material on a double density disk is not able to reliably maintain a signal written by a high density format. It is definately worthwhile, for peace of mind, to use properly graded disks designed for the correct capacity.

High density disks should only be formatted to ADFS 1.6Mb or DOS 1.44Mb. If you format a high density disk to a lower density format, beware; you may not be able to read them in a high density drive! The additional hole on the opposite side of the write protect tab tells the high density floppy controller to treat the disk as high density. Some PCs get very confused when they find the disk has been formatted to a lower density.

On a final note, RISC OS3 does not look at the HD hole in any case and will attempt to format any disk to 1.6Mb.



All stick, no joy

Please could you give me a list of suppliers that produce games that are compatible with the A3010 internal joystick.

Very many games on the Archimedes use the mouse or keyboard but not all them can use a joystck. For some of the games, a joystick is simply not suitable.

Robert Hodge,
Harrogate, North Yorkshire

We contacted three major games producers for the Archimedes and asked them which of their games worked with the joystick.

The Fourth Dimension did not recommend using a joystick but instead recommended using the mouse or keyboard. They can be contacted on 0742 700661.

Krisalis Software said all its games can work with a joystick, they can be contacted on 0709 372290.

Superior Software said that all its games use the mouse and keyboard but only Repton 4 and TechnoDream can use the joystick. Superior is on 0652 658585.

Your questions answered

Most users of RISC OS have a question or two about it, use and the computers it controls. If this sounds like you, why not put pen to paper?

Send your questions or tips to:
Acorn Answers
Archimedes World
Argus House, Boundary Way
Hemel Hempstead
Hertfordshire. HP2 7ST

We regret that we cannot offer personal replies to questions so, please, do not include a stamped addressed envelope.

Data Flow Logo

How do you transfer a hand drawn logo to the computer if you haven't got a scanner? Easy - use a ruler!

Take your hand drawn artwork and measure the widest point across its centre and then its overall height. Now, create a rectangle of the same proportions in ArtWorks. You'll find this easier if a visible gridlock is on. As the logo leans at an angle, take the original image and draw a vertical line from the bottom left hand corner to meet another line that runs along the top of the logo. Measure the distance between the vertical line and the top left tip of the slant and make a note of the figures.

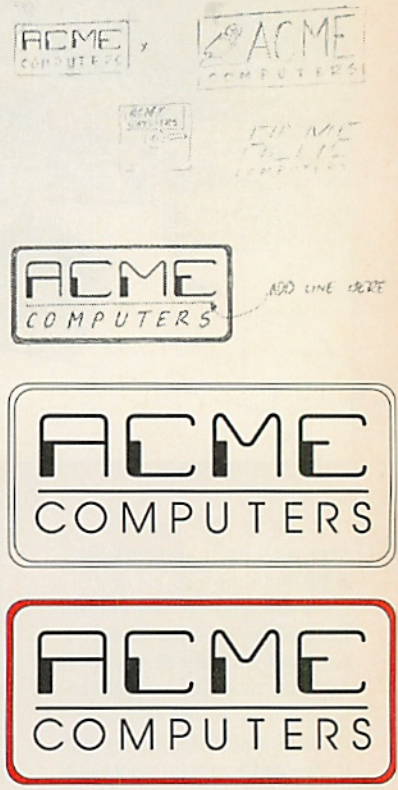
To transfer this to ArtWorks, use the straight line tool and draw a diagonal vertical line from the bottom left corner of the rectangle to the top, ensuring that you arrive at the same distance as you measured on the original. Now, draw a line along the top that is the same length as the original drawn image and then back to the base line at the same angle as the other upright line. All that remains is to close the parallelogram by drawing a line to meet the original starting point. Move your shape away from the original rectangle as you will need it later as a mould for the whole logo.

Now measure and copy the original drawn rectangle and triangle and place them in position on the upright rectangle, making sure that the join style is set to Mitre and the fill and line colour to cyan.

Select the text tool and type in DATA, using a sans serif font such as Gill Sans Bold Condensed (Eric.Bold.Narrow from Electronic Font Foundry). First kern the space between the letters A and T, and T and A together (using the Ctrl and R keys with the cursor between the letters). Position the word at the top left of the rectangle and make sure that the tops of the letters line up with the top of the rectangle. Now, using the scale tool, enlarge this to fit the space between the rectangle and the triangle. Change the line width to 1mm and the join style to Mitre, select the colour icon and fill the inside of the type with cyan and the line with red.

Type in FLOW using the same typeface, then position this, making sure that the baseline sits on the bottom line of the size rectangle that you originally drew. Add a space between each character to make it fit the line better and change the fill style to red. You should now have an upright version of the logo.

Select the parallelogram you created first and copy this to the clipboard, using Ctrl C. Select the whole of your logo, then select the perspective tool and finally click select on the right hand clipboard (the one with the arrow going from it) on the tool bar. The whole of the logo is transformed into the italic version as on the visual.



Design techniques

Designing a logo using ArtWorks

It is theoretically simple to design logo artwork using the Archimedes. Software, such as ArtWorks, makes image manipulation extremely simple but can do nothing to actually design a good image - such decisions must come from the user.

Designing a logo, for a company or whoever, involves a number of processes and is not simply a case of sitting down and fiddling. The purpose of this article is to describe each of the stages and build up a number of acceptable images. There are, essentially, four stages of design with the fifth stage being to transfer the image to the computer. Naturally, you can, if you wish, produce all the rough work electronically, but we have taken a more

ACME Computers Logo

The ACME Computers logo is fairly simple to achieve. Again your greatest ally is your trusty ruler. With the gridlock on and the rounded corner box tool selected, draw a box and in the Info bar type the dimensions - 70mm wide, 32mm high and a corner radius of 3.5mm. Change the line width to 2mm and set no fill colour and line colour to red.

The word ACME was originally drawn by hand, but is not particularly difficult to convert. Each letter is based on a rectangle 12mm wide by 11mm high, which is drawn with the line width at 0 and no colour. Produce this box and clone it using Ctrl K. Move the clone to its position and repeat until you have all four in line, 5mm from both sides and the top. Select all the boxes and bring up the alignment toolbox (Ctrl F9), select the Align option and set this to centre on top to bottom and opt to distribute them using the centre on left to right function. Now, with the boxes evenly spaced, set the line width to 0.75mm and the line ends to round and draw the outline of the letters without the boxes on the left, changing from straight to curved lines to do the corners. The filled areas to the left of each character are filled rectangles with a line width of 0.75mm and the join style set to round. This gives the lines and the characters a rounded feel.

The lettering of Computers comes next. It is set in 22 point Optima Roman (Oxford), with an extra space between each character. Centre this line in the width of the box and 5mm from the bottom line. All that remains is to add the rule between the two words. A 0.5mm line is sufficient weight for this and it should be centred between the two words and extending the width of the lettering.

Banter Communications Logo

This is the most complex of the three logos. Firstly, choose the type style for Banter, (Dicot Bold on ArtWorks Font Disc 10) and Communications, (Garamond italic (NewLondon.Italic EFF)). Type in both words, spacing out the lettering so they look approximately like the visual.

The telephone cord is made up of a series of loops with a 0.5mm black outline and a yellow infill. This has to be done in separate sections and joined together as the line twists over itself. In order to fill the loops with yellow, each section has to be a closed shape. Using the curved line tool, draw the outline of the first loop, following it round and back on itself. Smooth curves are easy as the control points are automatically locked together - as you move one, the other moves as if pivoted from the point on the curve, keeping it smooth. If you want to make the curve bend differently from the point on the curve, then double click with select on the point and you'll find the two control points move independently of each other. Another double click will again smooth out the curve join.

Where the loop disappears behind the cord, the end of the line must exactly match the line above. To do this magnify it until it fills the window, set the WYSIWYG knob to 2 and the gridlock off. Adjust the control points on the end line until they both match and clone this first loop and position it to the right of the first one. Select the two left end points with adjust and drag one of them until it lines up with the part of the first loop that goes under the cord. Send the second loop to the back and as the first loop is now on top it will mask the second.

Clone the second loop and position it evenly from the second, then send it to the back. Repeat for all the other loops. Add a line to the inside top of each loop to make it look as if the curve carries on towards the top line. Finally, position the word BANTER between the loops and Communications below the loops making sure there is a space between each character. A 0.5mm rule finishes off the whole logo.

traditional approach here. We chose ArtWorks for converting the images because of its power and ease of use. Users of ArtWorks could consider the ideas and techniques described here for other work as well.

For those of you without ArtWorks, the principles detailed in the first four stages are relevant to any design process. Only stage five relates to transferring your design into ArtWorks, although ArtWorks can be used during the initial design stages to help produce the visuals by providing quick lines of type which can be traced or, with the outline printing option, an outline version to colour in.

Stage One - The Concept

Actually conceiving the idea for a logo is probably the hardest part of the design process. Firstly, you need to understand your needs and be able to portray an image that fits. A logo should 'say' the company name, or have a direct relation to its main activity - although this is not 100 percent necessary. Sketch out a few ideas to see what looks good and get a second opinion. Rough ideas for the logo are then put down in a more permanent form, from an image in the head to paper. In this form, the design is pretty rough but the basic idea should be visible. Hopefully, the logo should reflect the client's wishes.

Stage Two - The Presentation Visual

The pencil roughs are now turned into a more realistic form so that you can see what the finished logo will look like. Decisions need to be taken on what colours and typefaces to use. The result should be a colour visual of the logo ready to present.

Stage Three - The Finished Visual

This should incorporate all the amendments and comments that have been noted and should, at this point, answer the original design brief if one was supplied. The final choices of typeface and colours have been made, the logo is now looking more like the final version.

Stage Four - The Colour Artwork

Colour versions of the black and white artwork are produced to show how the logo appears in colour. The final stage is to transfer the logo on to computer so that you can use it to produce the artwork for printing.

Stage Five. Transferring the Logo to ArtWorks

The approved logo design is now ready to be transferred to the computer, so that it can be used on all the items of artwork ready for print. The artwork can be produced in a number of packages including ArtWorks, Vector, Impression, Draw, etc., depending on your means. For the purposes of this article, I have used ArtWorks but the principles apply to most vector based drawing packages.

You can see from these examples that it is really easy to produce good looking logos - all it takes is a little time and effort. Breaking a logo down into its constituent parts makes it simple to reproduce the artwork on computer, the end result being a high quality logo.

STEVE BALLINGER

ACE of CLUBS

ARCHIMEDES COMPUTER ENTHUSIASTS

Two major diskzines merge and news from Acorn fans in Australia

If you want to gain new members, why not send details of your organisation to our Ace?
Ace of Clubs, Archimedes World, Boundary Way, Hemel Hempstead, Hertfordshire, HP2 7ST

Issue 11 of Illusions marks the merger of the magazine with Virtuality. The obvious difference is that there is now one PD disk. Readers of the old Illusions (who have paid for 2 PD disks) will be sent the PD Monthly Update to make up their full subscription. The second difference is that the merger of mags means more in the way of articles, especially the in-depth material. The tutorials (Impression, ArtWorks, Basic, Demo coding, Fractals and Wimp programming) are the mainstays of the new edition. A third difference sees the use of Magpie to display the magazine (as per Virtuality) with a new layout. The layout works fairly well but I did miss the old Illusions reader program.

When you close a Magpie binder you have to double-click on the file to get it back so it's not as convenient. The text export and print features have gone too and Magpie only provides a (graphical) print page facility, which isn't much use for reading the articles away from the computer. The display has inherited Virtuality's excellent graphics but as yet there are no sounds or animations.

Editor John Reed says: "We are aiming to be a far more professional disk magazine now, but the friendly club atmosphere will still be in the magazine." Issue 11 is certainly good value with plenty to try out, including an interesting, if reduced, selection of PD. Note the new prices: 1 issue £3, 3 issues £8.50, 6 issues £16.

The Illusions Summer Pack is the first of a regular three monthly dose of extras which relate to Illusions. For instance this first Impression pack contains clip art designed especially and relates to the tutorial. Contact Illusions for more details.

Birchwood Blues?

If you've got them, then you can do something about it by ringing Paul Hanley, who runs the Birchwood Archimedes User Group, on 051 426 3915.

Big Screen

Wakefield Acorn Computer Group has now purchased its video projector and five foot screen, so making its excellent presentations an even more attractive prospect for the 85 strong membership. Not all activity is indoors, however. You can meet the club on Sunday September 26th at the North Wakefield Radio Rally at Outwood Grange School, North Wakefield.

MARK WEBB

CONTACT LIST

Clubs

Club: ARM Club.
Membership fee: £10.00 minimum donation.
Details: Contact club secretary Dr Nick Evans, The ARM CLUB, FREEPOST ND6573, London, N12 0BR.

Club: Archimedes Users Club.
Membership fee: £8.00 per year.
Details: Archimedes Users Club, 6 Furzeland House, Sheephouse Way, New Malden, Surrey, KT3 5PH.

Club: CAUG (C Acorn User Group), C
Membership fee: £12.00 CVu, plus £5.00
Details: William Anderson, 18 Heath Drive, Binfield Heath, Henley on Thames, Berkshire, RG9 4LX.

Club: Reading computer User's Group (RUG)
Membership fee: Free
Details: Meeting on first Tuesday of every month. Contact Mike Mallett on 0734 410597 (fax and phone).

Club: Wakefield Acorn Computer
Membership fee: Annual fee £6 for an individual, £10 for family membership, £6 for corresponding membership.
Details: Monthly meetings and newsletter. Secretary Chris Hughes, 95 Cumbrian Way, Lupset Park, Wakefield, WF2 8JT.

Club: Cardiff Archimedes SIG.
Details: Contact secretary Bill Harwood on 0222 862245.

User Groups

User Group: Elements.
Membership: £12 per year.
Details: Elements, 42 Keswick Road, Great Bookham, Leatherhead, Surrey, KT23 4BH.

User Group: PipeLine
Frequency: Four disks per year, separate versions for PipeDream 3 and 4.
Price: £22.00 per year.
Details: Abacus Training, 29 Okus Grove, Upper Stratton, Swindon, Wiltshire, SN2 6QA.
Fax/Phone: 0793 723347.

Disk Fanzines

Disk fanzine: Illusions
Frequency: Bi-monthly
Subscription: £8.50 for 3, £16.00 for 6
Single issue: £3.00
Supplier: Illusions, 42 Wimborne Gardens, Ealing, London, W13 8BZ.
Editor: John Reed

Disk fanzine: Syracuse
Frequency: Monthly
Single issue: £4.99.
Details: ASTE, Wythenee House, 10 Alastair Crescent, Prenton, Wirrel, L43 0UR.
Editor: Alex Wells.

Disk fanzine: New Dawn
Frequency: Bi-monthly
Subscription: None
Single Issue: Free
Details: Available as Public Domain, initially from Data
Editor: COBRA

Training

Training: Acorn
Location: Cambridge and local centres
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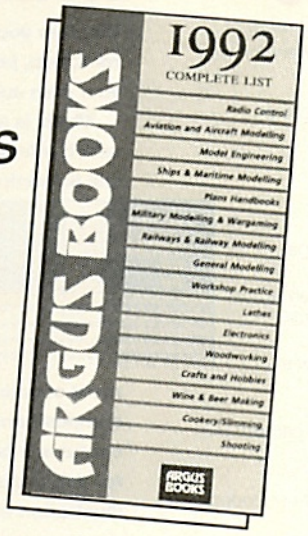

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software Sale

Starter Pack V2.0

The new, revised starter pack has been carefully compiled to provide new and experienced users of Acorn's 32-bit computer system with an array of useful programs. There's something for everyone with a mixture of 28 utilities and games all on one disk.

Algebra	Calculates numeric expressions
Bas-Text	Converts Basic programs to text files
BBC-Arc	Transfer BBC files to your Archimedes
Cells	A graphical adventure game
Char Def	Define your own system fonts
Chronicle	Gives a history of events
CLIA	Desktop enhancer with many features
Columns	A game of thought; match the coloured blocks
Connect 4	A classic. Get four counters in a line to win
Convert	Lets you convert imperial to metric
Currency	Converts sterling into foreign currency
Disk Man	Keep a track of your disks with this database system
Dissass	Peek at the computer's memory with this dissassembler
Dzap	With this program you can edit tracks and sectors of a disk
Font-Draw	Allows you to convert fonts into draw files
Fractlands	Generate fractal landscapes on your desktop
Impstat	Gives the status of an Impression document
Keystrip	Edit and generate keystrips
Missile	Another classic arcade game. Save your cities from attack
Module Maker	A complete course in how to write modules
Morph	Make a house turn into a car with this program
Resistor	Calculate the values of colour coded resitors
Solitaire	The board game where one ball must be left in the middle
Tacitus	In this awesome game, you will need your wits about you
ThreeView	Animate 3D objects, draw, rotate, and tilt them
Winsave	Save any desktop window, ideal for all DTP work
Woody	Collect the gold, watch out for blobs!
Z88-Arc	Transfer data from a Z88-Archimedes

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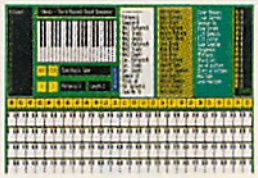
Whether your musical tastes are classical, rock, pop, jazz, blues or dance, you can create your own audio tracks with Musix.

Musix is a sophisticated sound track editor which offers ease of use. In no time at all, you will be composing your own patterns, adding your own sounds and building them up into a tune which you can add to any program you wish.

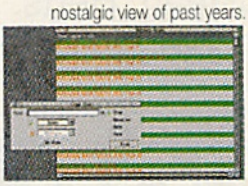


Musix is supplied with a library of over 100 instrument sounds for you to use in your own compositions. A second disk in the pack contains a range of tunes which you can use for demonstration purposes or to provide an illustration of how Musix can make music.

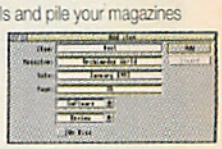
INFO	DISKS	ORDER NO.	PRICE
	2	AW015	£10.00

Archiver

Wading your way through piles of magazines can offer a nostalgic view of past years. But, if you're looking for one particular article, it can be a nnoying to sift through bundles of back issues. That's where Archiver comes in.



Archiver allows you to enter details of articles in magazines so that you can store them away for later retrieval. Simply tap in the details and pile your magazines up in chronological order, then let Archiver do the searching.



Archiver is supplied complete with a ready-made database detailing the content's of each issue of Archimedes World, up to August 1993.

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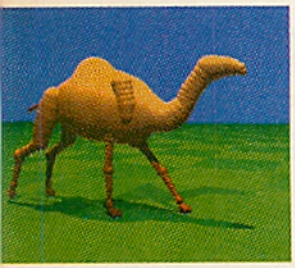
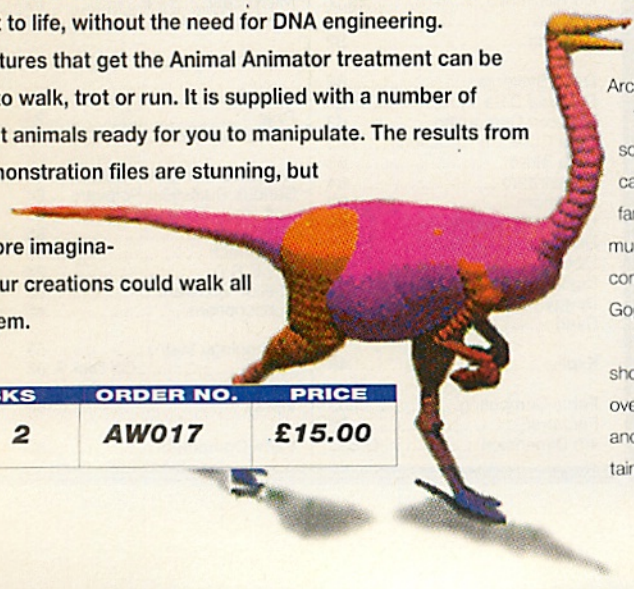


Animal Animator

Create your own micro Jurassic Park with this popular package. Animal Animator gives you the ability to design and animate your own creatures, ranging from dinosaurs to aliens - in fact, any creature that has a torso and limbs can be brought to life, without the need for DNA engineering.

Creatures that get the Animal Animator treatment can be taught to walk, trot or run. It is supplied with a number of different animals ready for you to manipulate. The results from the demonstration files are stunning, but with a little more imagination, your creations could walk all over them.



INFO	DISKS	ORDER NO.	PRICE
	2	AW017	£15.00

Image Library

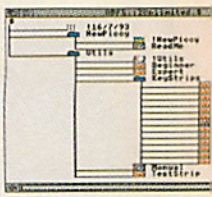
INFO	DISKS	ORDER NO.	PRICE
	7	AW006	£30.00

A compilation of previous disks to provide an extensive collection of images for your use. This item has been completely repackaged and is now supplied on seven compressed disks by Matt Black, exclusively to Archimedes World.

The library offers scenes which are categoried into fantasy, cartoons, cars and much more. Also, the collection contains a huge number of Van Goghs!

This collection really shouldn't be missed. It contains over 30Mb of compressed files and is educational and entertaining, making an ideal present.

Utils



Utils is one of the most comprehensive utility packages available for RISC OS. Compatible with both RISC OS2 and 3, it combines a wide range of facilities into one program.

Utils makes using the desktop easier with functions such as keyboard macros for desktop and CLI functions, desktop window tidying options, a reconfigurable RAM Disk, an application menu to locally store application run paths as an alternative or addition to the Pinboard, desktop clocks, !RUN file editor and much more.

Utils is one of the first programs to run its own internal check for any sign of virus activity. This ensures that Utils will remain safe to use at all times.

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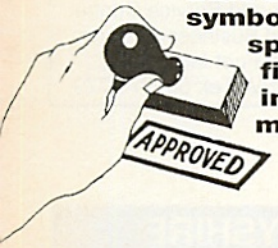
Clipart Collection

This is an ever expanding collection of clip art for use on any Archimedes. In essence, the art contained upon these disks is for use with DTP type systems, although the file types are standard and are fully compatible with Paint or Draw. Watch out for new additions soon.

PACK 1 - Borders, Business, Signs & Symbols

Disk 1: Over 200 ornamental frame borders for use in RISC OS DTP style packages. Also included is a set of bitmap clip art images on the business theme.

Disk 2: A set of Draw files of silhouette symbols covering a range of subjects from sport to travel. Also included is a set of five sprite files depicting icons for use in desktop applications such as multi-media or DTP.



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This single disk pack contains a number of professionally produced vector graphics images depicting scenes from the natural world. From plantlife to wildlife, the collection conveys the true beauty of our native planet. Most images are colour and all are stored in Draw format.

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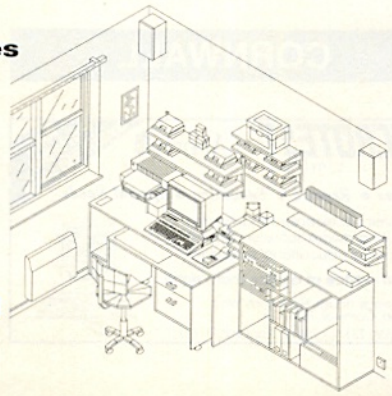
	1	AW019	£10.00

PACK 4 - CAD

A collection of quality line images produced by a professional draughtsman. Most images are monochrome CAD style line drawings with sections to cover computers, automotives and armaments. Over 30 top quality images in Draw format.



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	1	AW020	£10.00

info

General Information

Archimedes World offers an array of useful software and support packages for every user of Acorn RISC OS computers through its regular Software Sale pages. The products advertised here are carefully chosen to provide users with the best possible quality.

All software is supplied on ADFS 800K disks and is accompanied by full instructions, sometimes supplied as text files on the disks themselves.

New products

Archimedes World has a policy of updating its software catalogue in a regular basis, so watch out each month for new products.

Ordering information

To place your order, please use the coupon below. Ensure that you include the title of the product you wish to order, as well as the order code (AW???). If you are paying by cheque, please write your name and address upon the reverse side. Postage and packing is free within the UK and Europe. Please add £1.00 for other overseas destinations.

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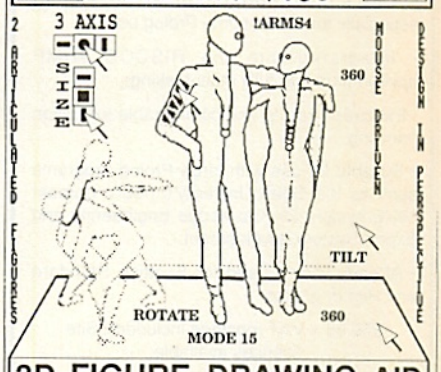

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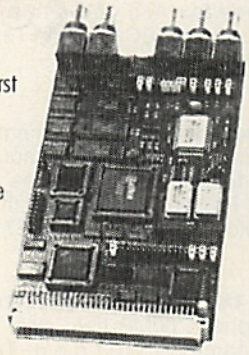

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Hertfordshire, HP2 7ST.
Telephone: 0442 66551. Facsimile: 0442 66998.

Archimedes World is published on the second Friday in the mo
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Subscriptions and Back Issues
Argus Subscription Services, Queensway House, 2 Queensway, R
Surrey, RH1 1QS. Tel: 0737 768611. UK £35.40, Europe £45.
Sterling Overseas £48.70, US Dollars overseas $88. Airmail rate
request. Back issues are available in limited quantities up to one
from the date of publication. Each copy costs the cover price, plus
P&P. Please telephone before ordering to check for availability.
Please make all cheques payable to ASP.
USA Subscriptions Agent: Wise Owl Worldwide Publications, 431
238th, Street, Torrance, CA 90505, USA. Tel: (310) 375 6258

Distribution UK Newstrade
SM Distribution Ltd. 6 Leigham Court Road, Streatham, London. S
2PG. Telephone 081 677 8111. Facsimile: 081 677 0136. Tele
261643.

Overseas Sales
UK Specialist retail sales and all magazine availability enquiries sh
be addressed to the Copy Sales Coordinator at the editorial addre

Typesetting: Island Graphics, Chesham
Colour: Croxons, Chesham
Printers: Garnet Dickinson Print, Rotherham

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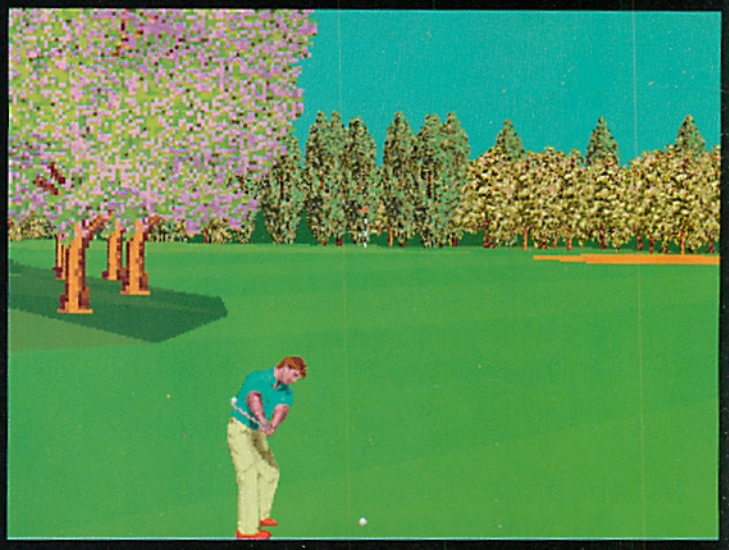

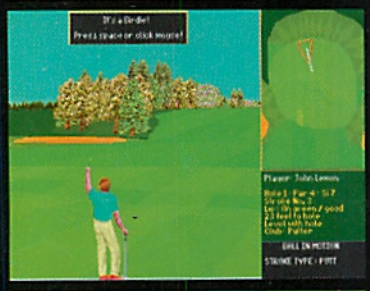

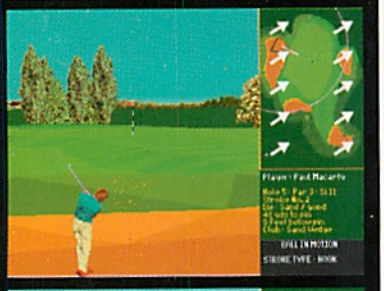

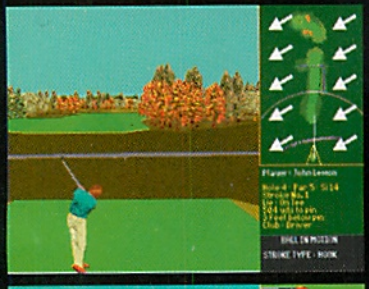

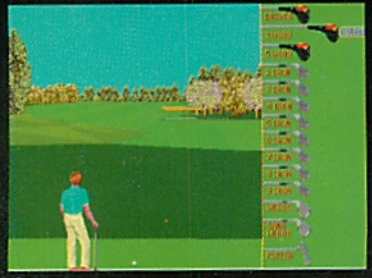

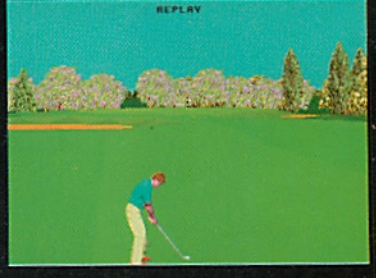

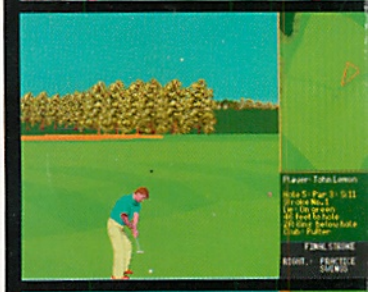

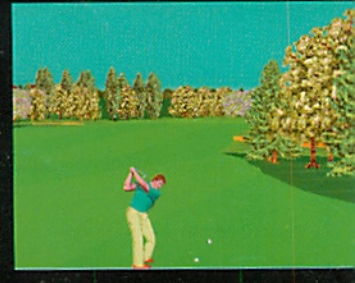

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